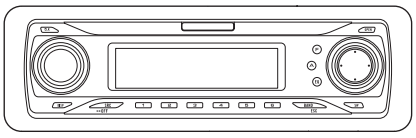
Pioneer sound.vision.soul

Service Manual



DEH-P5750MP/XM/ES

ORDER NO.
CRT3357

MULTI-CD CONTROL HIGH POWER CD/MP3/WMA/WAV PLAYER WITH FM/AM TUNER

DEH-P5750MP/XM/ES

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech.Module	Remarks
CX-3158	CRT3394	S10.1AAC	CD Mech. Module:Circuit Description, Mech. Description, Disassembly

For details, refer to "Important Check Points for Good Servicing".

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ⓒ**PIONEER CORPORATION 2004**

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SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

● Service Precaution

1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) on page 53.
4. After replacing the pickup unit, be sure to check the grating.

COMPACT disc DIGITAL AUDIO TEXT

Designed for Windows Media™

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SPECIFICATIONS

General

Rated power source ..... 14.4 V DC
(allowable voltage range: 12.0 – 14.4 V DC)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Backup current..... 5 mA or less
Dimensions (W × H × D):
- DIN
  - Chassis ..... 178 × 50 × 157 mm
  - Nose ..... 188 × 58 × 19 mm
- D
  - Chassis ..... 178 × 50 × 162 mm
  - Nose ..... 170 × 46 × 14 mm

Weight ..... 1.4 kg

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.

Maximum power output ..... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance ..... 4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance ..... 2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer):
- Low
  - Frequency ..... 40/80/100/160 Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB
- Mid
  - Frequency ..... 200/500/1k/2k Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB
- High
  - Frequency ..... 3.15k/8k/10k/12.5k Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB

Loudness contour
- Low ..... +3.5 dB (100 Hz), +3 dB (10 kHz)
- Mid ..... +10 dB (100 Hz), +6.5 dB (10 kHz)
- High ..... +11 dB (100 Hz), +11 dB (10 kHz)
  (volume: –30 dB)

Tone controls:
- Bass
  - Frequency ..... 40/63/100/160 Hz
  - Gain ..... ±12dB
- Treble
  - Frequency ..... 2.5k/4k/6.3k/10k Hz
  - Gain ..... ±12dB

HPF:
- Frequency ..... 50/80/125 Hz
- Slope ..... –12 dB/oct

Subwoofer:
- Frequency ..... 50/80/125 Hz
- Slope ..... –18 dB/oct
- Gain ..... ±12dB
- Phase ..... Normal/Reverse

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format:
- Sampling frequency ..... 44.1 kHz
- Number of quantization bits ..... 16; linear

Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Dynamic range ..... 92 dB (1 kHz)
Number of channels ..... 2 (stereo)
MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3
WMA decoding format ..... Ver. 7, 7.1, 8, 9 (2ch audio)
WAV signal format ..... Linear PCM & MS ADPCM

FM tuner

Frequency range ..... 87.5 – 108.0 MHz
Usable sensitivity ..... 8 dBf (0.7 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 μV/75 Ω, mono)
Signal-to-noise ratio ..... 75 dB (IEC-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.05 % (at 65 dBf, 1 kHz, mono)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 45 dB (at 65 dBf, 1 kHz)

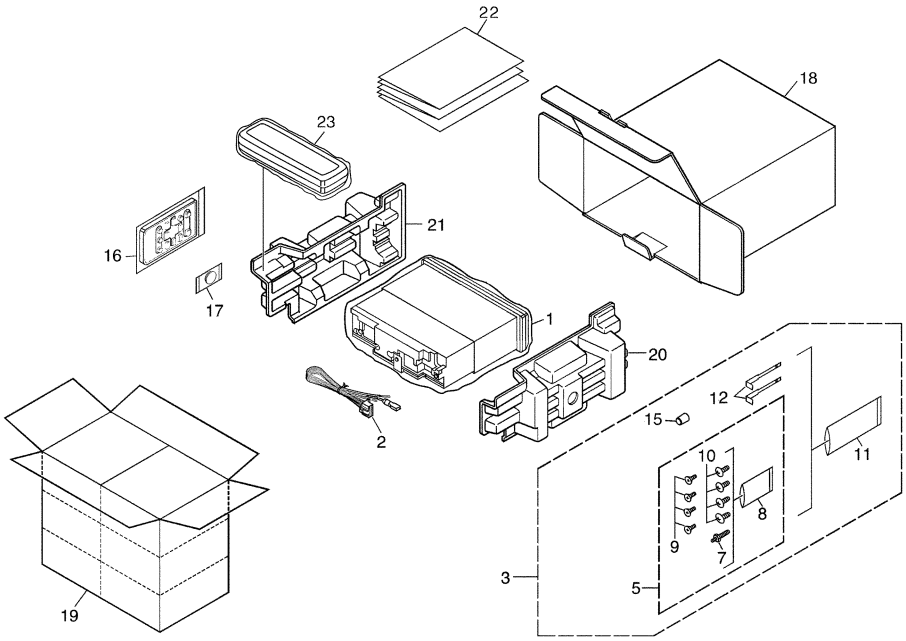
AM tuner

Frequency range ..... 531 – 1,602 kHz (9 kHz)
530 – 1,640 kHz (10 kHz)

2. EXPLODED VIEWS AND PARTS LIST

*NOTES : • Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*
• The ⚠ mark found on some component parts indicatesthe importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
• Screw adjacent to▽mark on the product are used for disassembly.
• For the applying amount of lobricants or glue, follow the instructions in this manual. (In the case of no amount instructions,apply as you think it appropriate.)

2.1 PACKING



PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Polyethylene Bag	CEG-162
	2	Cord Assy	XDE7007
	3	Accessory Assy	CEA4850
	4	•••••	
	5	Screw Assy	CEA3849
	6	•••••	
	7	Screw	CBA1650
*	8	Polyethylene Bag	CEG-127
	9	Screw	CRZ50P090FTC
	10	Screw	TRZ50P080FTC
*	11	Polyethylene Bag	CEG-158
	12	Handle	CNC5395
	13	•••••	
	14	•••••	
	15	Bush	CNV3930
	16	Remote Control Unit	CXC3173
*	17	Battery	CEX1065
	18	Carton	XHG7091
	19	Contain Box	XHL7091
	20	Protector	XHP7003
	21	Protector	XHP7004
	22-1	Owner's Manual	XRD7062
	22-2	Owner's Manual	XRD7063
	22-3	Installation Manual	XRD7064
	22-4	Caution Card	CRP1310
	23	Case Assy	CXB3520

Owner's Manual,Installation Manual

Part No.	Language
XRD7062	English, Spanish, Portuguese(B)
XRD7063	Traditional Chinese, Arabic
XRD7064	English, Spanish, Portuguese(B), Traditional Chinese, Arabic

A

B

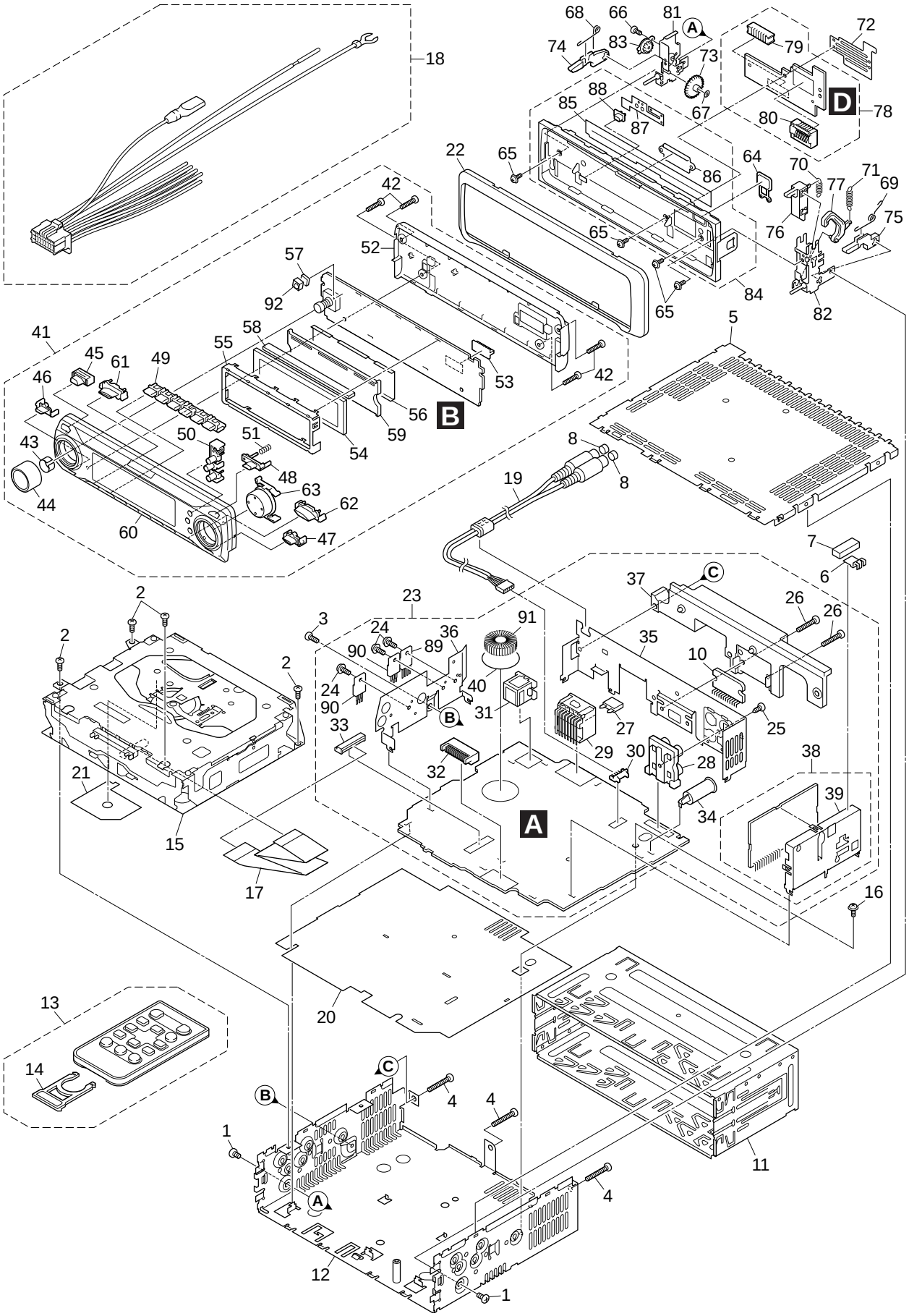
C

D

E

F

2.2 EXTERIOR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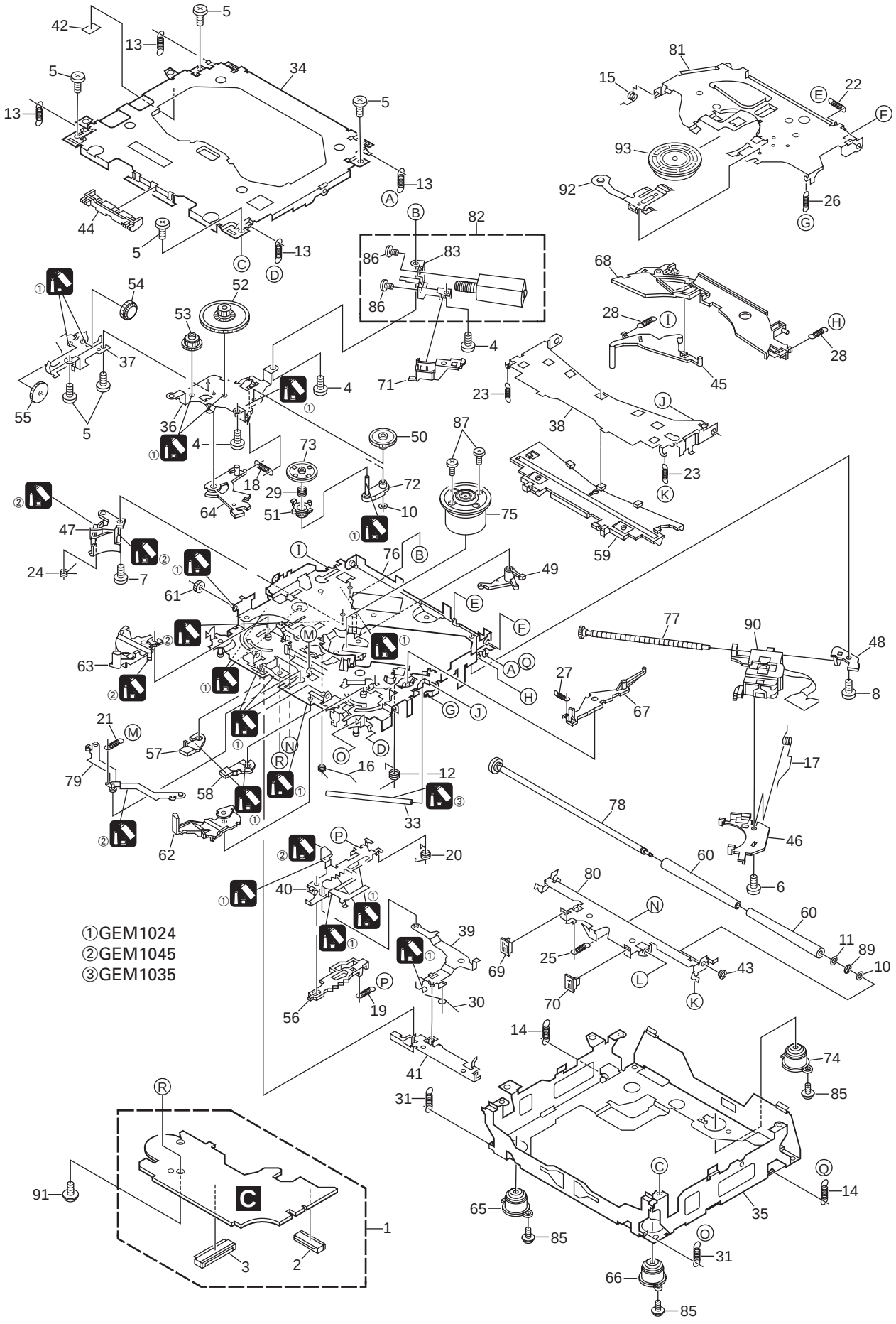
EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FTC
	3	Screw	BSZ30P060FTC
	4	Screw	BSZ30P200FTC
	5	Case	CNB2793
	6	Earth Plate	CNC8915
	7	Cushion	CNM8890
	8	Cap	CNV6727
	9	•••••	
	10	IC(IC301)	PAL007A
	11	Holder Unit	CXB6681
	12	Chassis Unit	CXB9528
	13	Remote Control Unit	CXC3173
	14	Cover	CNS7068
	15	CD Mechanism Module(S10.1AACA)	CXK5668
	16	Screw	ISS26P055FTC
	17	Cable	XDE7002
	18	Cord Assy	XDE7007
	19	Cord Assy	XDE7009
	20	Insulator	XNM7100
	21	Insulator	XNM7106
	22	Panel	XNS7088
	23	Tuner Amp Assy	XWM7091
	24	Screw	ASZ26P060FTC
	25	Screw	BPZ26P080FTC
	26	Screw	BSZ26P160FTC
⚠	27	Fuse(10A)	CEK1208
	28	Pin Jack(CN352)	CKB1051
	29	Plug(CN901)	CKM1376
	30	Plug(CN351)	CKS1238
	31	Connector(CN101)	CKS3408
	32	Plug(CN801)	CKS3537
	33	Connector(CN651)	CKS3837
	34	Antenna Jack(CN401)	CKX1056
	35	Holder	CND1239
	36	Holder	CND1352
	37	Heat Sink	CNR1668
	38	FM/AM Tuner Unit	CWE1802
	39	Holder	CND2144
	40	Insulator	XNM7031
	41	Detachable Assy	XXA7281
	42	Screw	BPZ20P100FZK
	43	Spring	CBL1470
	44	Knob	XAA7021
	45	Button(CLK)	XAC7062
	46	Button(DISP)	XAC7063
	47	Button(SW)	XAC7064
	48	Button(OPEN)	XAC7065
	49	Button(1-6)	XAC7070
	50	Button(F,A,EQ)	XAC7071
	51	Spring	XBH7001
	52	Cover	XNS7087
	53	Connector(CN1800)	CKS4524
	54	LCD	XAW7013
	55	Holder	XNC7008
	56	Sheet	XNM7044
	57	Cushion	XNM7049
	58	Connector	XNV7020
	59	Lighting Conductor	XNV7021
	60	Sub Grille Assy	XXA7290
	61	Button Unit(SRC)	XXA7307
	62	Button Unit(BAND)	XXA7308
	63	Sub Button Assy	XXA7310
	64	Button(EJECT)	CAC7752
	65	Screw(M2x4.5)	CBA1647
	66	Screw(M2x4)	CBA1649
	67	Washer	CBF1038
	68	Spring	CBH2650
	69	Spring	CBH2651
	70	Spring	CBH2652
	71	Spring	CBH2653
	72	Holder	CND1254
	73	Gear	CNV5997
	74	Arm	CNV7400
	75	Arm	CNV7401
	76	Arm	CNV7402
	77	Arm	CNV7403
	78	Panel Unit	CWM8758
	79	Socket(CN1950)	CKS3550
	80	Connector(CN1951)	CKS4806
	81	Holder Unit	CXB9501
	82	Holder Unit	CXB9502
	83	Damper Unit	CXB9503
	84	Sub Panel Unit	XXA7361
	85	Cover	CNM6854
	86	Lighting Conductor	CNV6487
	87	Spring	CBL1512
	88	Pin	CNV6486
	89	IC(IC901)	NJM2388F84
	90	Transistor(Q650,911)	2SD2396
	91	Choke Coil(L901)	CTH1280
	92	IC(IC1802)	TSOP4840SB1

2.3 CD MECHANISM MODULE

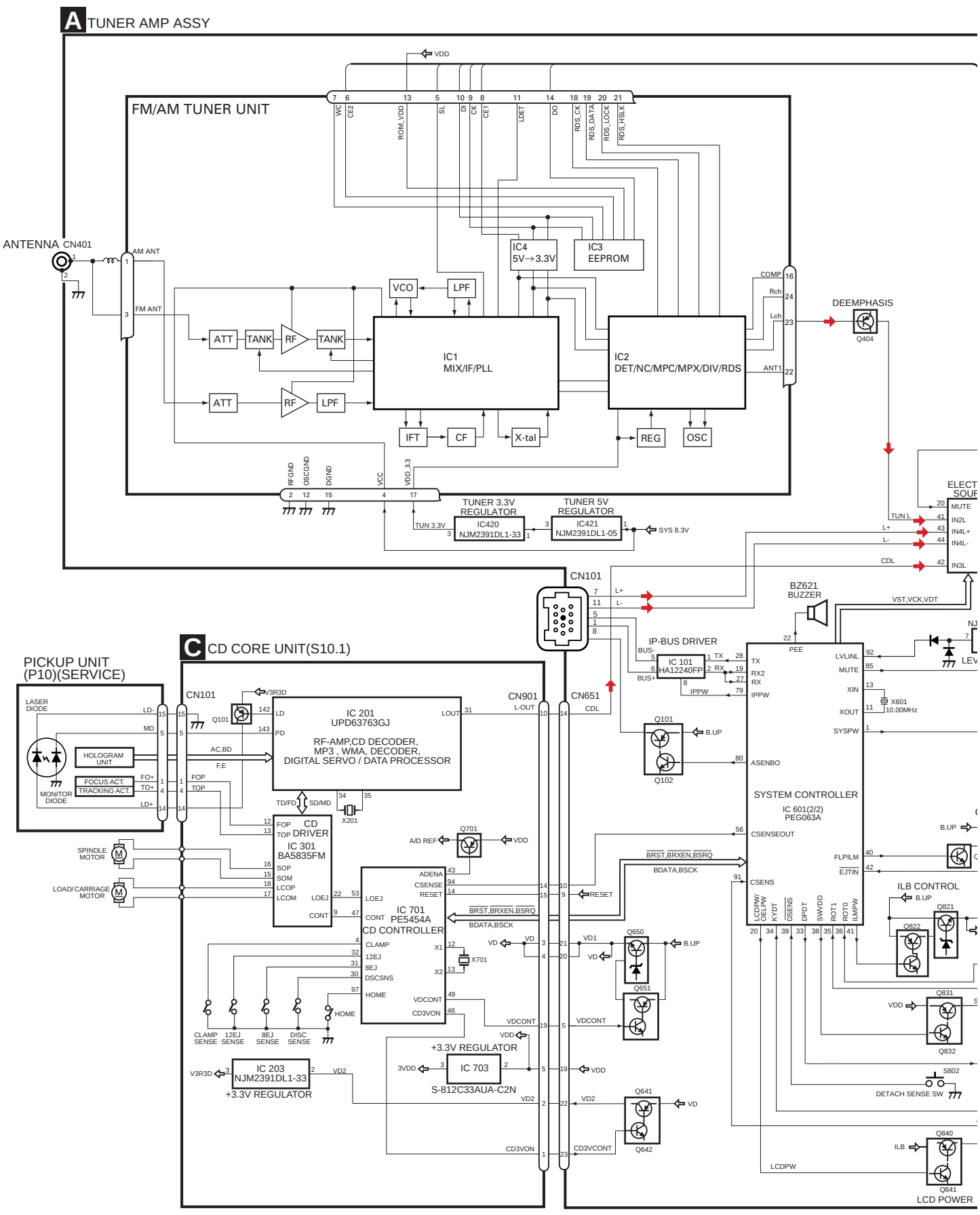


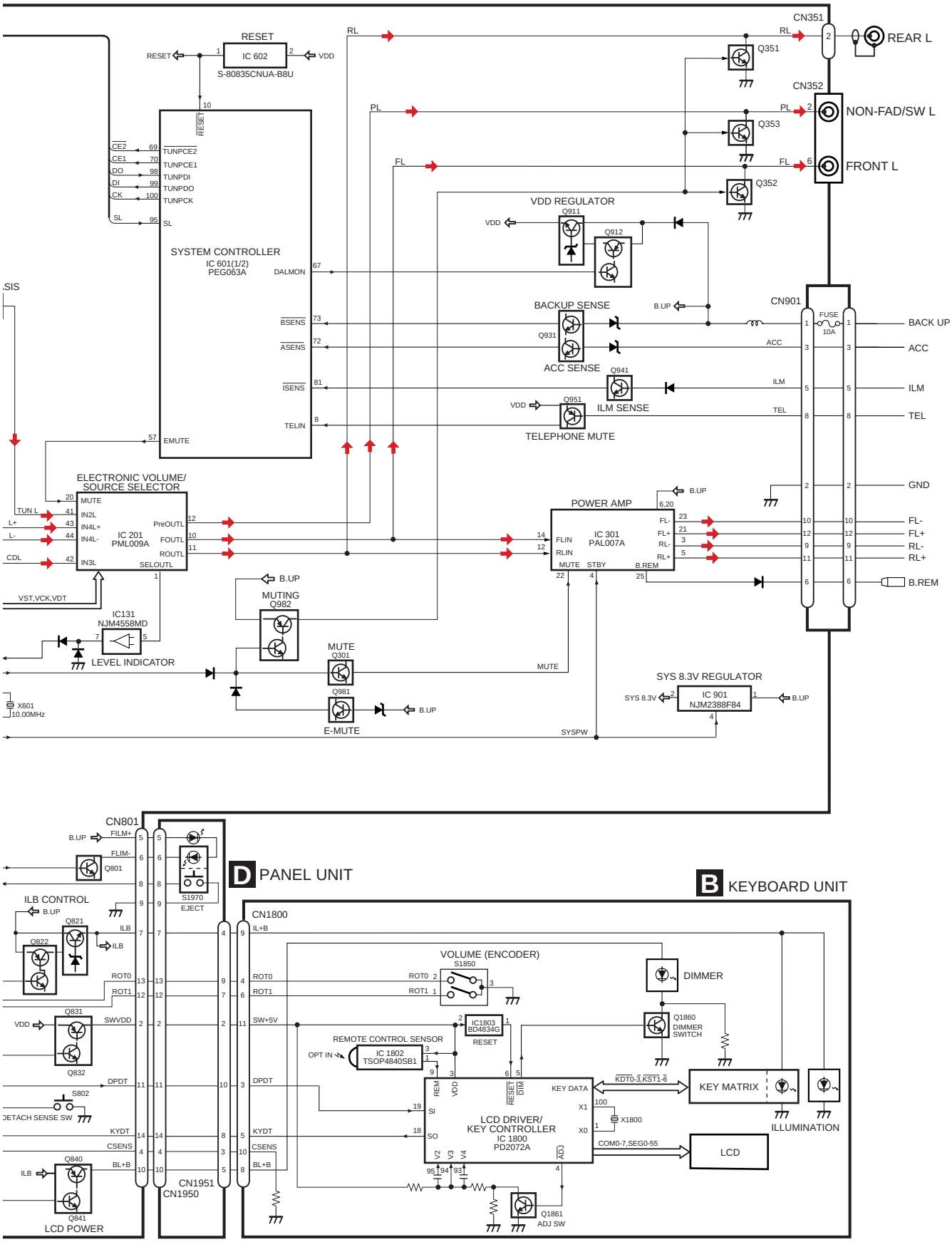
CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	CD Core Unit(S10.1)	CWX3096
	2	Connector(CN101)	CKS4182
	3	Connector(CN901)	CKS4017
	4	Screw	BMZ20P035FTC
	5	Screw	BSZ20P040FTC
	6	Screw(M2x4)	CBA1362
	7	Screw(M2x3)	CBA1824
	8	Screw(M2x3)	CBA1825
	9	•••••	
	10	Washer	CBF1038
	11	Washer	CBF1060
	12	Spring	CBH2390
	13	Spring	CBH2606
	14	Spring	CBH2607
	15	Spring	CBH2608
	16	Spring	CBH2609
	17	Spring	CBH2610
	18	Spring	CBH2735
	19	Spring	CBH2612
	20	Spring	CBH2613
	21	Spring	CBH2614
	22	Spring	CBH2615
	23	Spring	CBH2616
	24	Spring	CBH2617
	25	Spring	CBH2620
	26	Spring	CBH2621
	27	Spring	CBH2641
	28	Spring	CBH2642
	29	Spring	CBH2643
	30	Spring	CBH2659
	31	Spring	CBH2688
	32	•••••	
	33	Shaft	CLA4441
	34	Frame	CNC9962
	35	Frame	CNC9963
	36	Bracket	CND2712
	37	Bracket	CND1895
	38	Arm	CNC9968
	39	Arm	CND1909
	40	Lever	CND2032
	41	Lever	CNC9984
	42	Sheet	CNM8134
	43	Collar	CNV7798
	44	Guide	CNV7799
	45	Arm	CNV8403
	46	Rack	CNV8374
	47	Holder	CNV8376
	48	Holder	CNV8377
	49	Arm	CNV8378
	50	Gear	CNV8379
	51	Gear	CNV8380
	52	Gear	CNV8381
	53	Gear	CNV8382
	54	Gear	CNV8383
	55	Gear	CNV8384
	56	Rack	CNV8385
	57	Arm	CNV8386
	58	Arm	CNV8387
	59	Guide	CNV8388
	60	Roller	CNV7218
	61	Gear	CNV8389
	62	Arm	CNV8391
	63	Arm	CNV8390
	64	Arm	CNV8392
	65	Damper	CNV7313
	66	Damper	CNV7314
	67	Arm	CNV8394
	68	Arm	CNV8395
	69	Guide	CNV8396
	70	Guide	CNV8397
	71	Holder	CNV8398
	72	Arm	CNV8402
	73	Gear	CNV8400
	74	Damper	CNV7618
	75	Motor Unit(M1)	CXC4440
	76	Chassis Unit	CXC2318
	77	Screw Unit	CXB8729
	78	Gear Unit	CXC2397
	79	Arm Unit	CXC2316
	80	Arm	CND1896
	81	Arm	CND1894
	82	Motor Unit(M2)	CXB8933
	83	Bracket	CNC9985
	84	•••••	
	85	Screw(M2x5)	EBA1028
	86	Screw	JFZ20P020FTC
	87	Screw	JGZ17P022FTC
	88	•••••	
	89	Washer	YE20FTC
	90	Pickup Unit(P10)(Service)	CXX1641
	91	Screw	IMS26P030FTC
	92	Spring	CBL1635
	93	Clamper	CNV8372

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

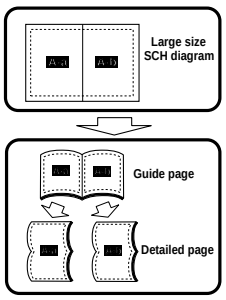


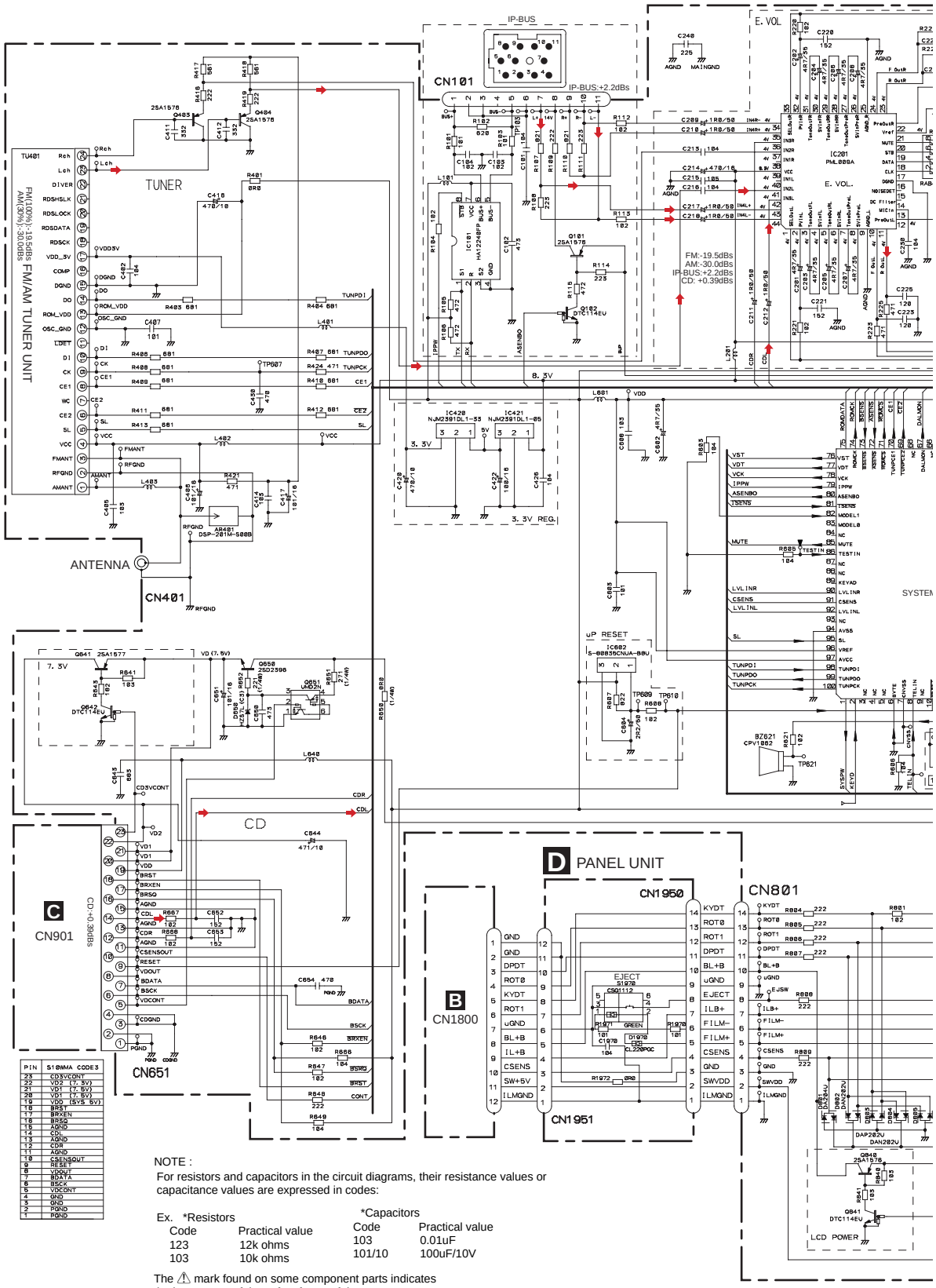

RESET
IC 602
S-80835CNUA-B8U
SYSTEM CONTROLLER
IC 601(1/2)
PEG063A
ELECTRONIC VOLUME/
SOURCE SELECTOR
IC 201
PML009A
IC131
NJM4558MD
LEVEL INDICATOR
MUTING
Q982
MUTE
Q301
Q981
E-MUTE
X601
10.00MHz
VDD REGULATOR
Q911
Q912
BACKUP SENSE
Q931
ACC SENSE
Q941
ILM SENSE
Q951
TELEPHONE MUTE
POWER AMP
IC 301
PAL007A
SYS 8.3V REGULATOR
IC 901
NJM2388F84
CN351
REAR L
Q351
CN352
NON-FAD/SW L
Q353
FRONT L
Q352
CN901
FUSE
10A
BACK UP
ACC
ILM
TEL
GND
FL-
FL+
RL-
RL+
B.REM
CN801
D PANEL UNIT
ILB CONTROL
Q821
Q822
Q831
Q832
S802
DETACH SENSE SW
Q840
Q841
LCD POWER
S1970
EJECT
CN1951
CN1950
B KEYBOARD UNIT
CN1800
VOLUME (ENCODER)
S1850
DIMMER
Q1860
DIMMER
SWITCH
REMOTE CONTROL SENSOR
IC 1802
TSOP4840SB1
IC1803
BD4834G
RESET
LCD DRIVER/
KEY CONTROLLER
IC 1800
PD2072A
KEY MATRIX
ILLUMINATION
LCD
X1800
Q1861
ADJ SW

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

A-a





PIN	S1@WMA CODE3
23	CD3VCONT
22	VD2 (7. 5V)
21	VD1 (7. 5V)
20	VD1 (7. 5V)
19	VDD (5VS 5V)
18	BRST
17	BRXEN
16	BRSQ
15	AGND
14	CDL
13	AGND
12	CDR
11	AGND
10	CSENSOUT
9	RESET
8	VDOUT
7	BDATA
6	BSCK
5	VDCONT
4	GND
3	GND
2	PGND
1	PGND

NOTE :

For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

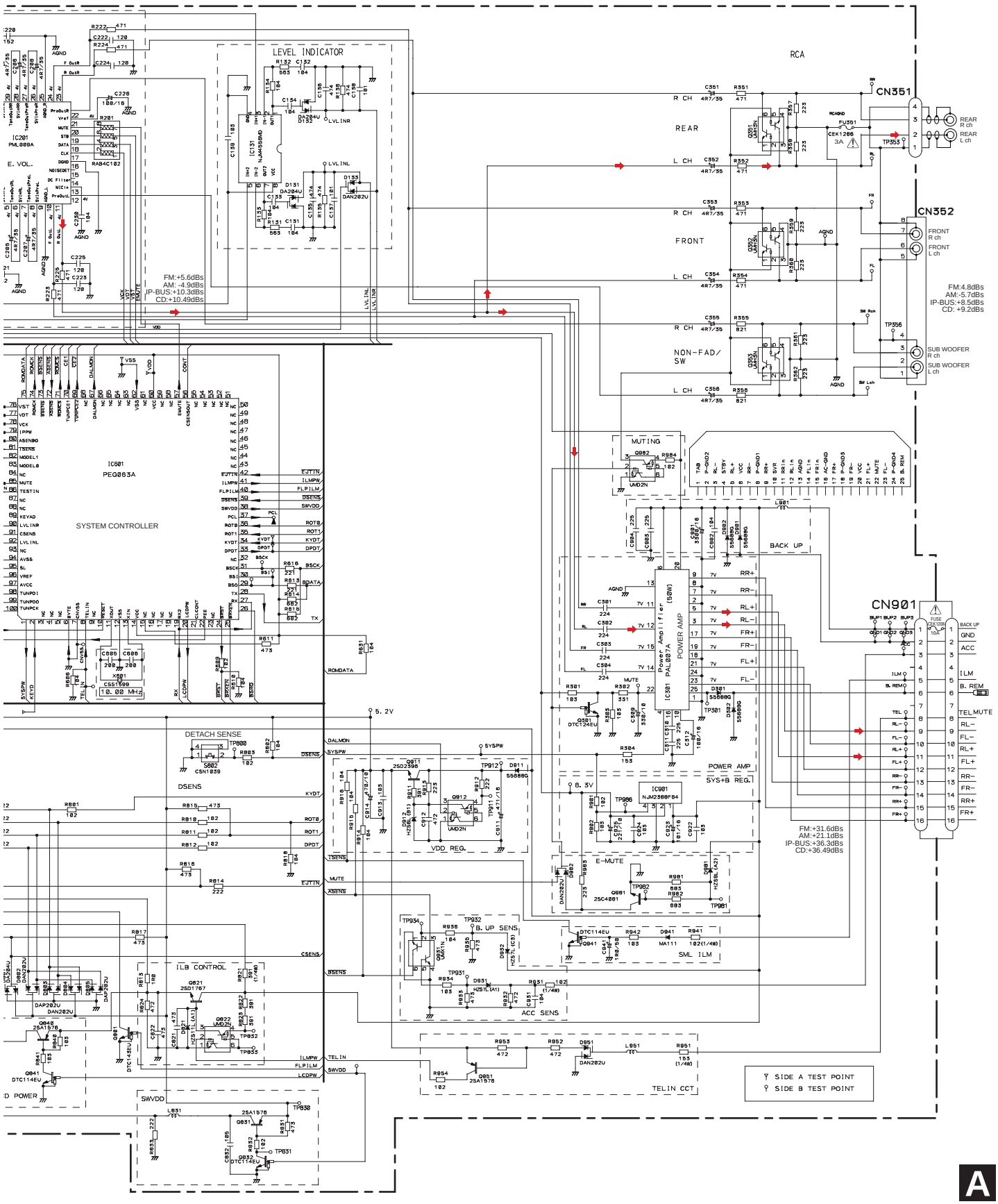
Ex. *Resistors		*Capacitors	
Code	Practical value	Code	Practical value
123	12k ohms	103	0.01uF
103	10k ohms	101/10	100uF/10V

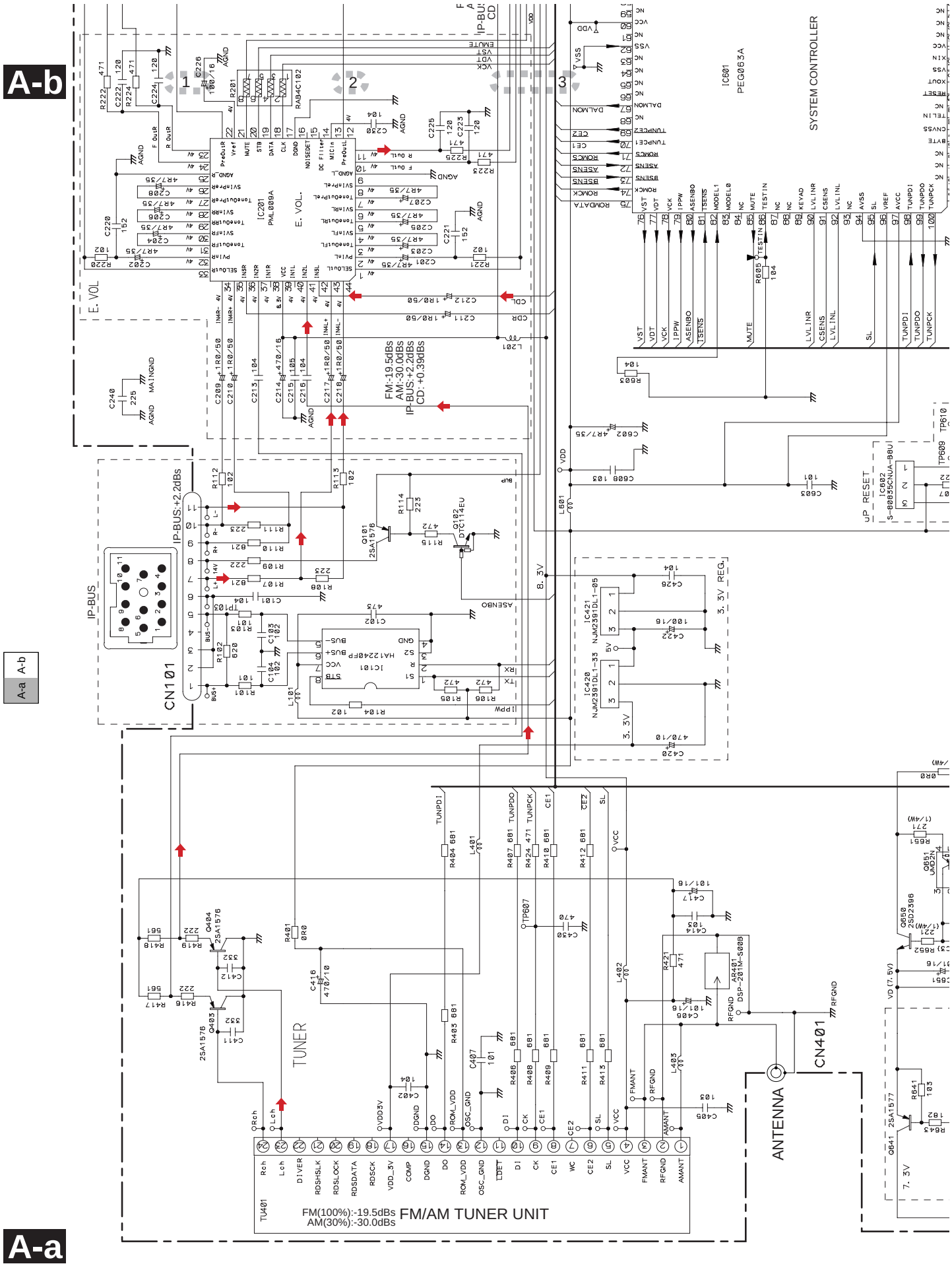
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

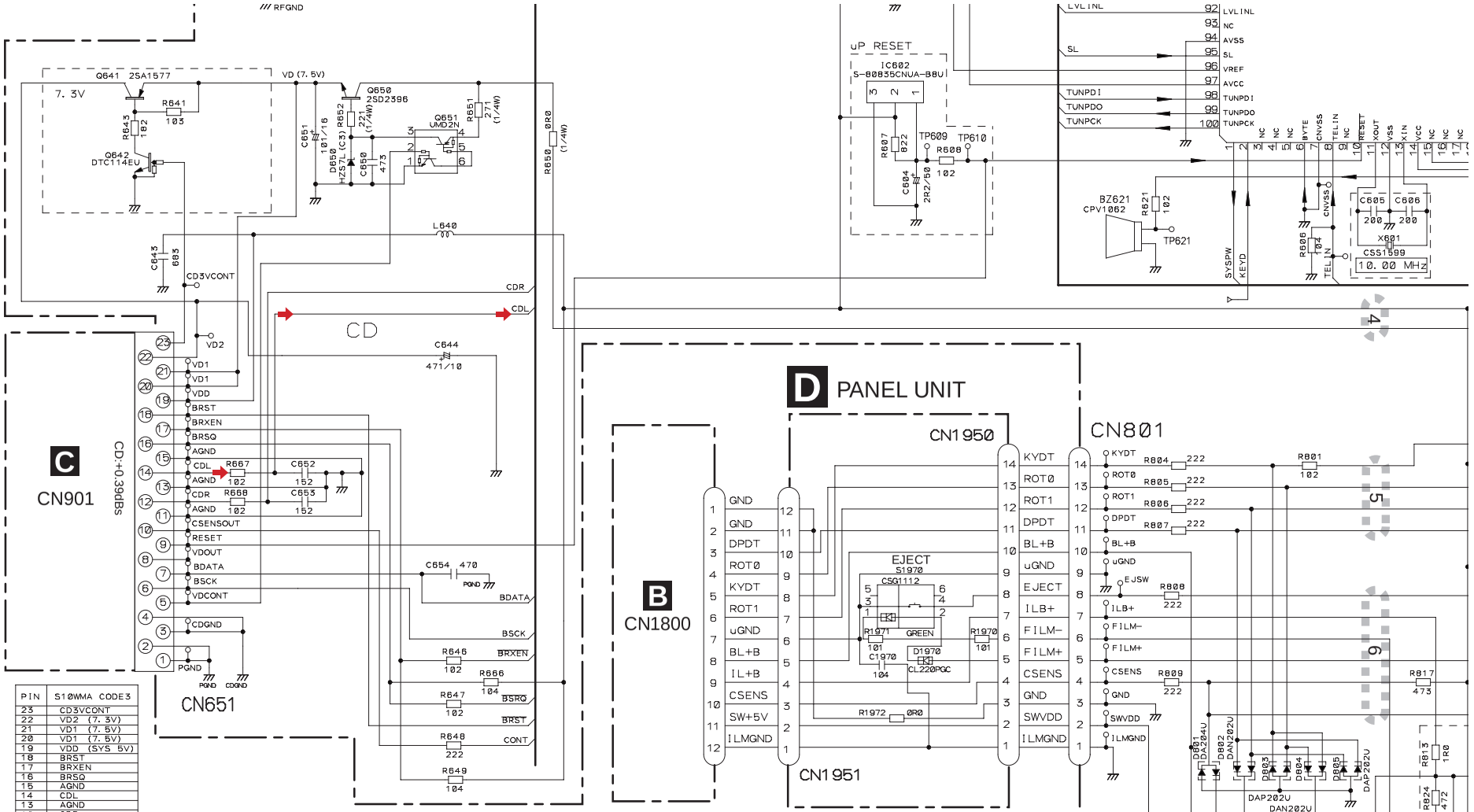
A D

A-b

A TUNER AMP ASSY




A-b
A-a
SYSTEM CONTROLLER
IC601
PEG063A
E. VOL
IC201
PML009A
IP-BUS
CD
FM:-19.5dBs
AM:-30.0dBs
IP-BUS:+2.2dBs
CD: +0.39dBs
IP-BUS:+2.2dBs
CN101
TUNER
FM/AM TUNER UNIT
TU401
FM(100%):-19.5dBs
AM(30%):-30.0dBs
ANTENNA
CN401
3. 3V REG.
UP RESET
IC602
S-80835CNUA-B8U
IC421
NJM2391DL1-05
IC420
NJM2391DL1-33
8. 3V
3. 3V
7. 3V
VD (7. 5V)
A-a
A-b



PIN	S10WMA CODE3
23	CD3VCONT
22	VD2 (7.3V)
21	VD1 (7.5V)
20	VD1 (7.5V)
19	VDD (SYS 5V)
18	BRST
17	BRXEN
16	BRSQ
15	AGND
14	CDL
13	AGND
12	CDR
11	AGND
10	CSENSOUT
9	RESET
8	VDOUT
7	BDATA
6	BSCK
5	VDCONT
4	GND
3	GND
2	PGND
1	PGND

NOTE :

For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

Ex. *Resistors

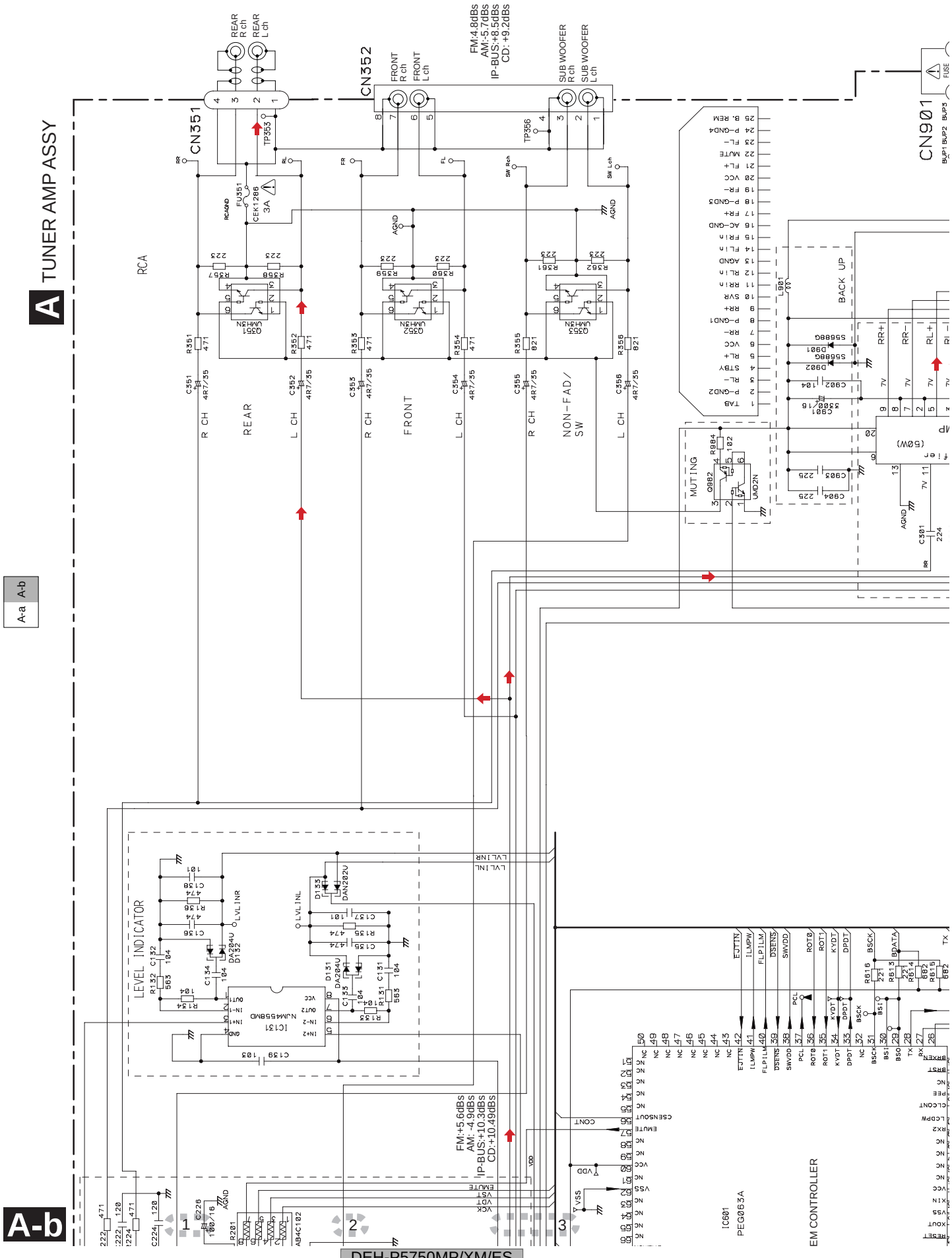
Code	Practical value
123	12k ohms
103	10k ohms

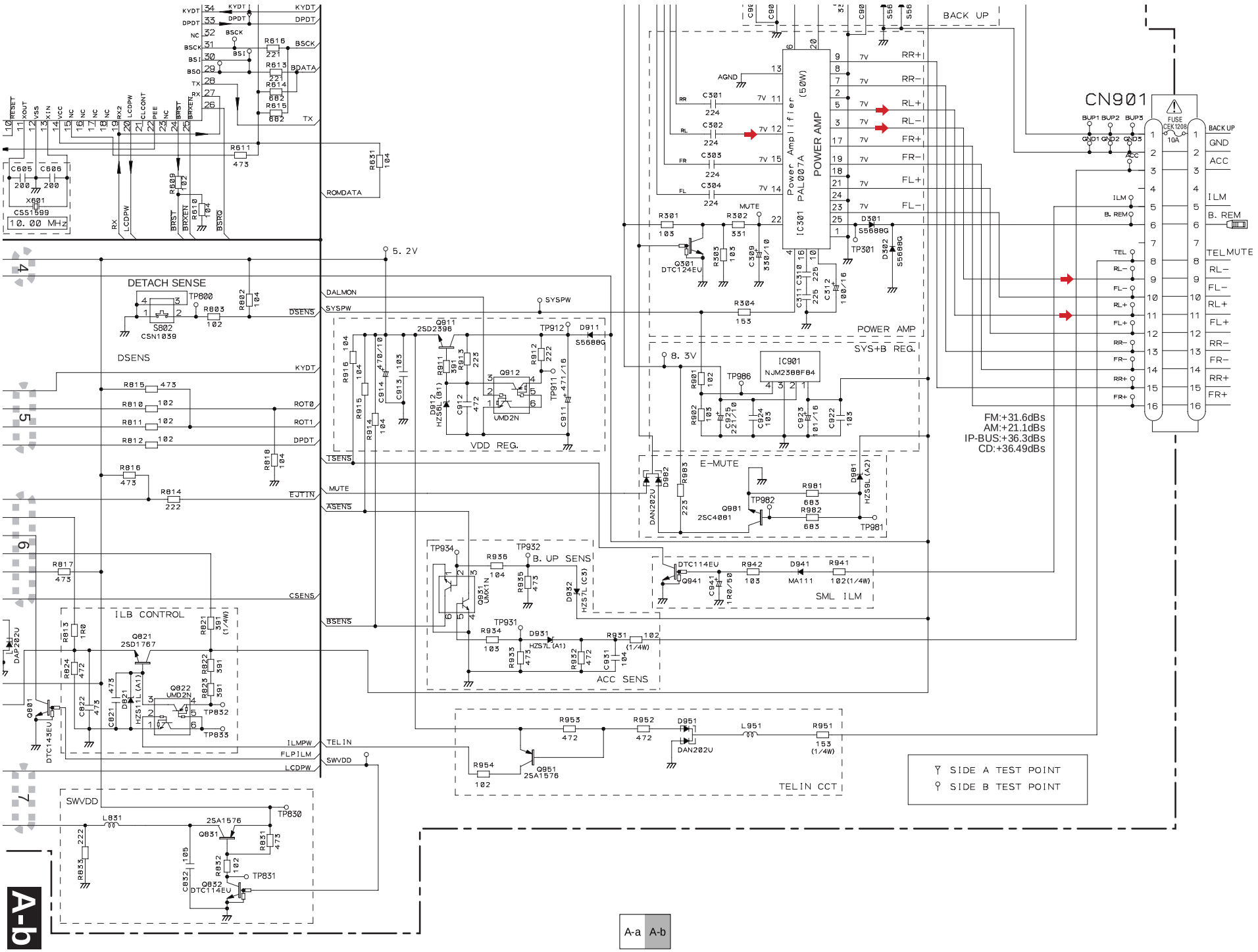
*Capacitors

Code	Practical value
103	0.01uF
101/10	100uF/10V

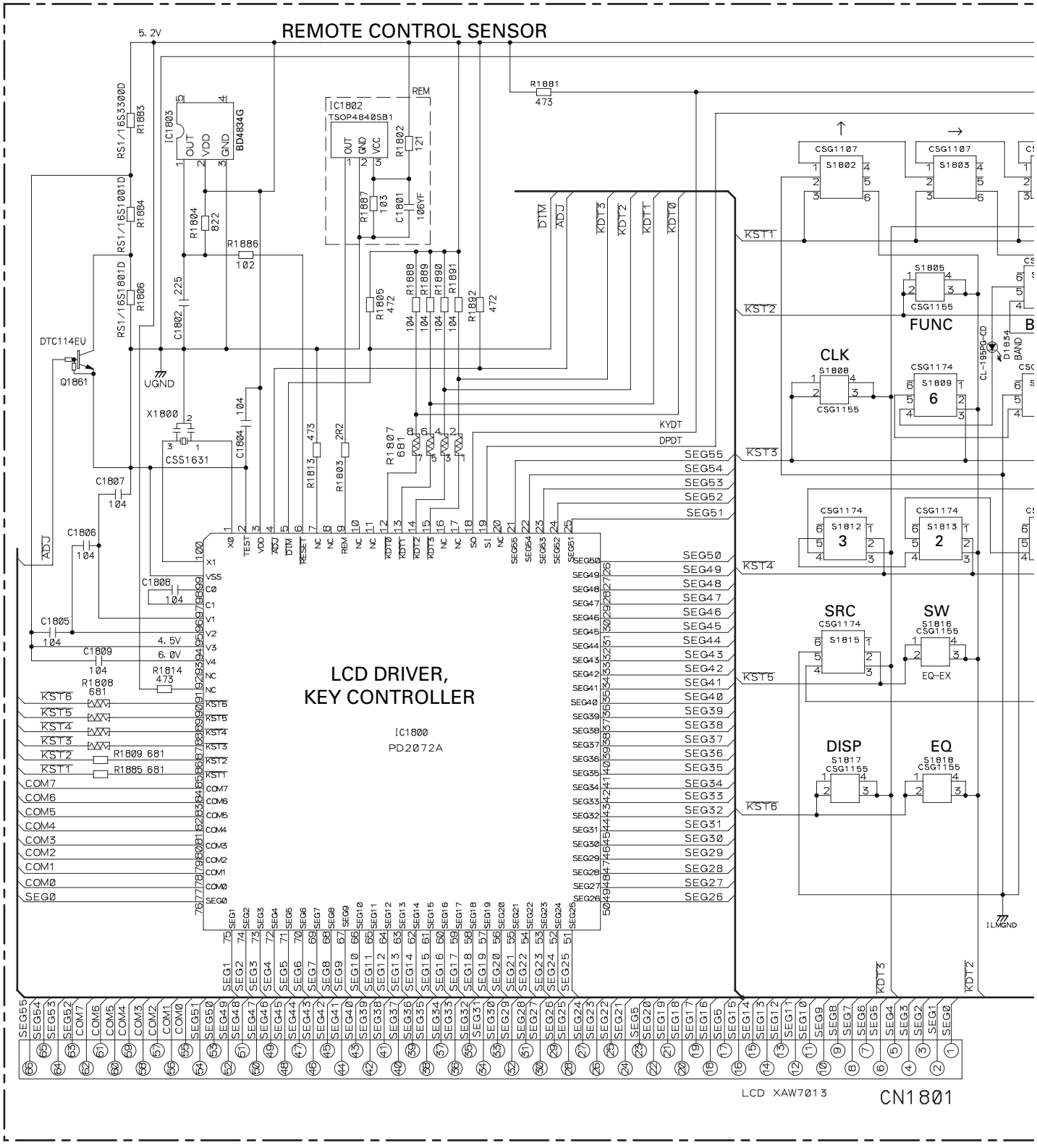
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A-a A-b

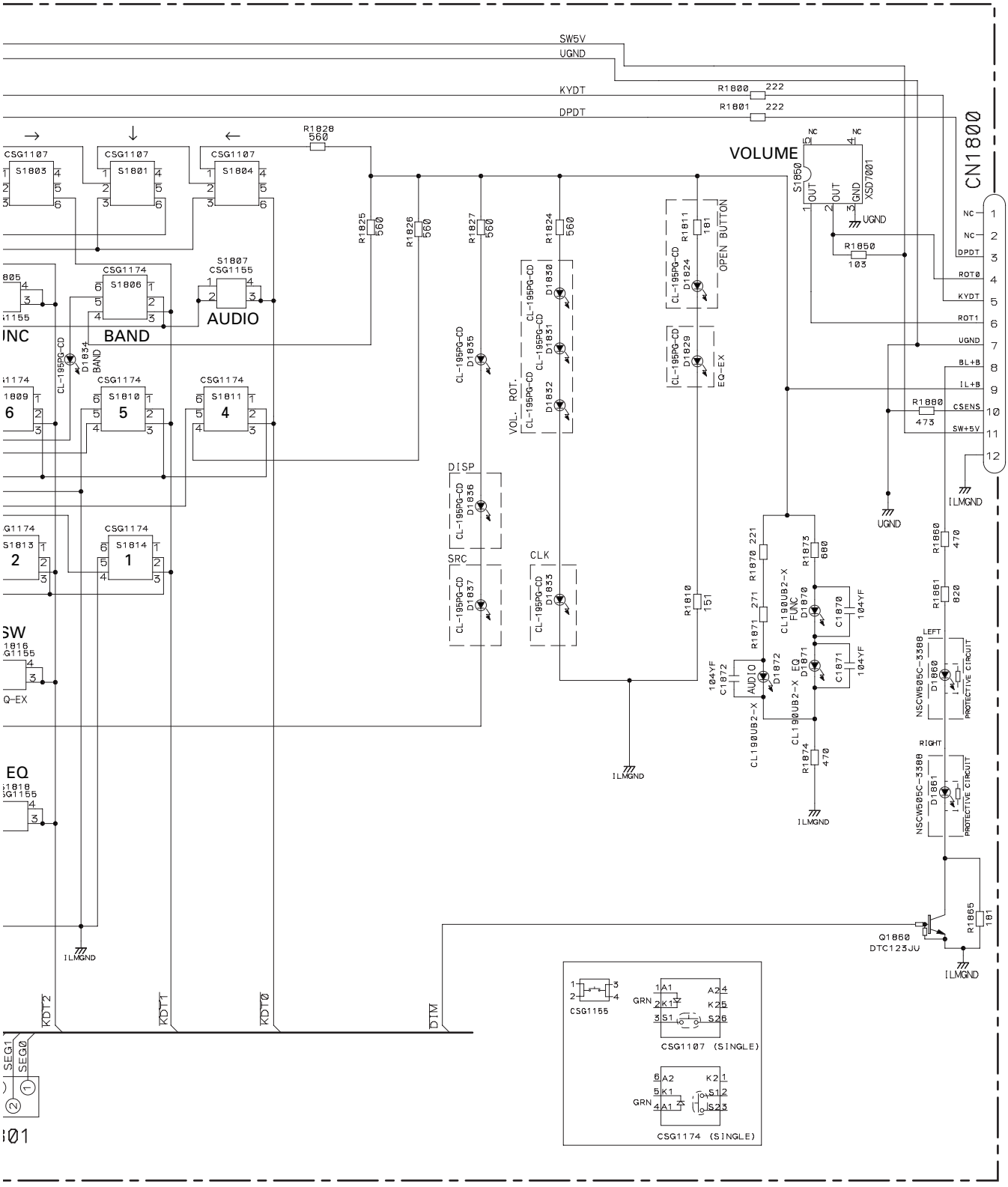

A TUNER AMP ASSY
A-b
A-a
REAR R ch
REAR L ch
FRONT R ch
FRONT L ch
SUB WOOFER R ch
SUB WOOFER L ch
CN352
CN351
CN901
FM:4.8dBs
AM:-5.7dBs
IP-BUS:+8.5dBs
CD: +9.2dBs
RCA
REAR
FRONT
NON-FAD/ SW
R CH
L CH
BACK UP
MUTING
LEVEL INDICATOR
FM:+5.6dBs
AM: -4.9dBs
IP-BUS:+10.3dBs
CD:+10.49dBs
IC601
PEG063A
EM CONTROLLER
A-b


DEH-P750MP/XMES
A-b
A-a
BACK UP
POWER AMP
SYS+B REG.
VDD REG.
E-MUTE
SML ILM
ACC SENS
TELIN CCT
ILB CONTROL
DETACH SENSE
B. UP SENS
CN901
FM:+31.6dBs
AM:+21.1dBs
IP-BUS:+36.3dBs
CD:+36.49dBs
SIDE A TEST POINT
SIDE B TEST POINT

3.3 KEYBOARD UNIT

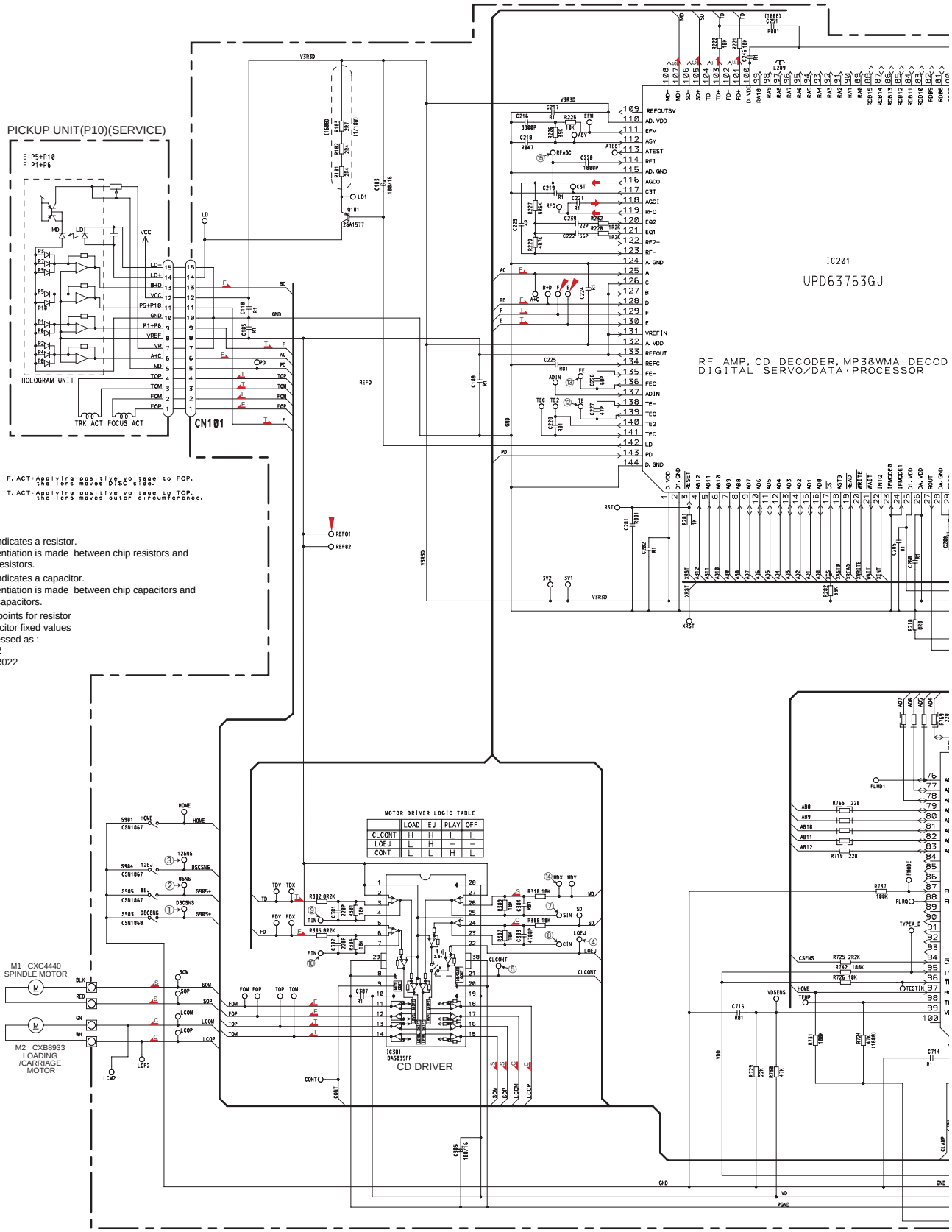


B KEYBOARD UNIT



3.4 CD MECHANISM MODULE(GUIDE PAGE)

C-a



C

C-b

NOTE1) GND ...CD LSI, RFAMP, CPU
PGND ...Actuator, Motor Driver
AGND ...Audio
These GND's are not connected to each other on PCB.
PGND is connected to a floating mechanism part by a screw.

Ⓑ Monitor land(ø1.2mm)
#:Monitor land(ø0.8mm)
Land for manual soldering

SWITCHES:
CD CORE UNIT(S10.1)
S901:HOME SWITCH.....ON-OFF
S903:DSCSNS SWITCH.....ON-OFF
S904:12EJ SWITCH.....ON-OFF
S905:8EJ SWITCH.....ON-OFF

The underlined indicates the switch position.

SIGNAL LINE
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
SPINDLE SERVO LINE

C CD CORE UNIT(S10.1)

MP3&WMA DECODER
PROCESSOR

3.3V REGULATOR

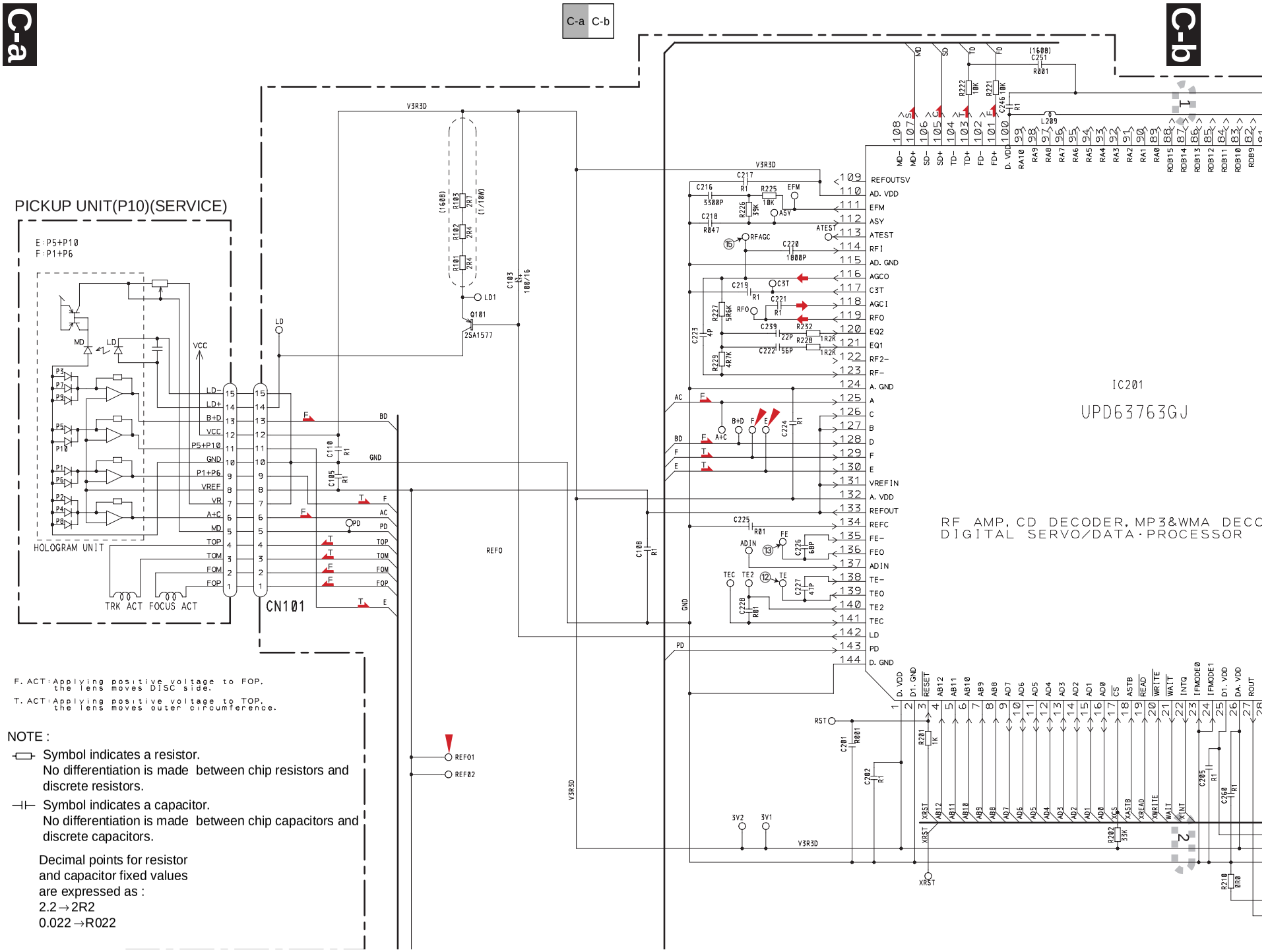
MICRO COMPUTER
IC701
PE5454A

3V REGULATOR

CN901

A CN651

C-a C-b



F. ACT : Applying positive voltage to FOP.
the lens moves DISC side.

T. ACT : Applying positive voltage to TOP.
the lens moves outer circumference.

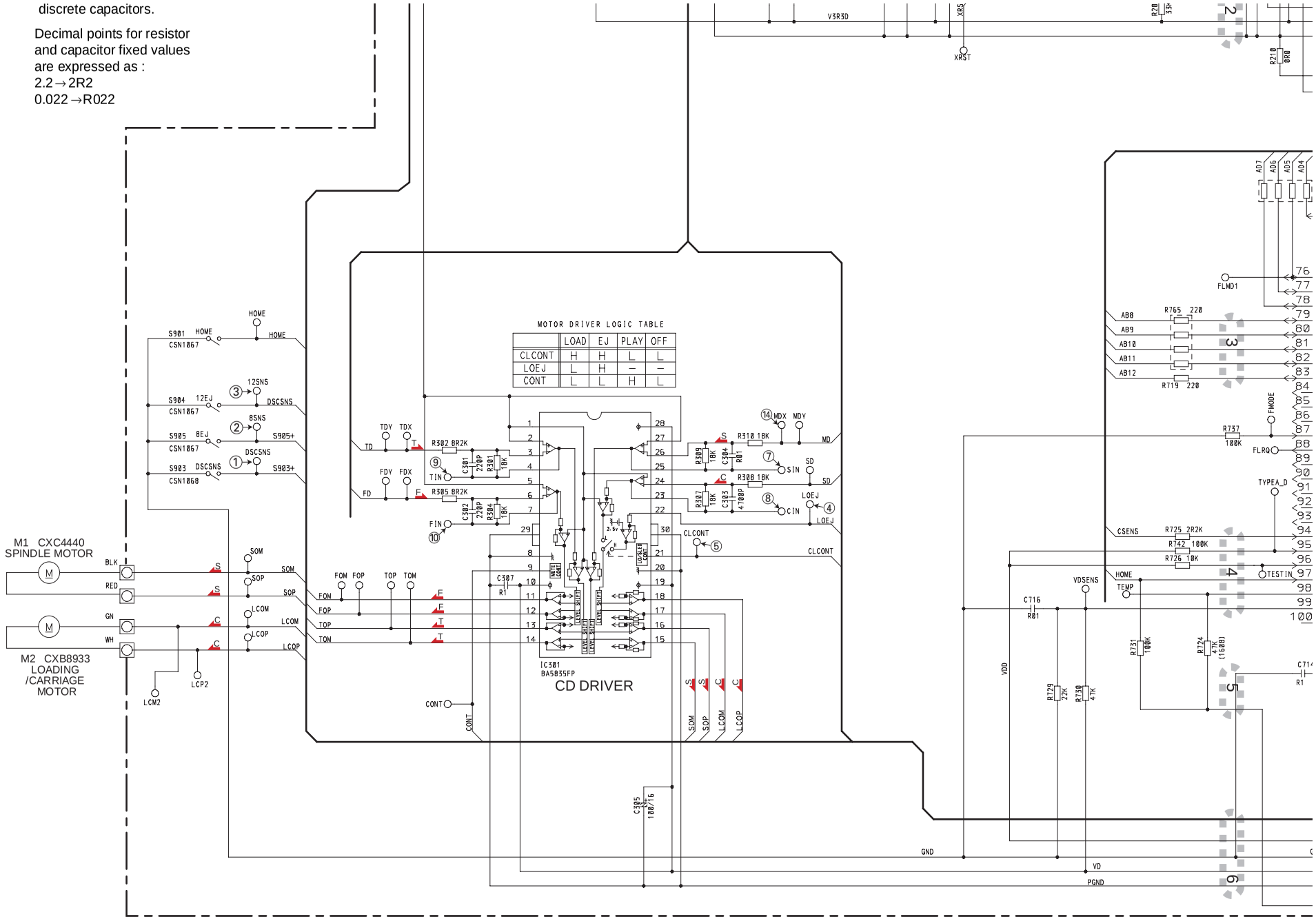
NOTE :

- Symbol indicates a resistor.
  No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor.
  No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022



C-a C-b

C-a

C-b

DEH-P5750MP/XMES

C-b

C-a C-b

NOTE1) GND ...CD LSI, RFAMP, CPU
PGND ...Actuator, Motor Driver
AGND ...Audio
These GND's are not connected to each other on PCB.
PGND is connected to a floating mechanism part by a screw.

Ⓑ Monitor land(φ1.2mm)
#:Monitor land(φ0.8mm)
Land for manual soldering

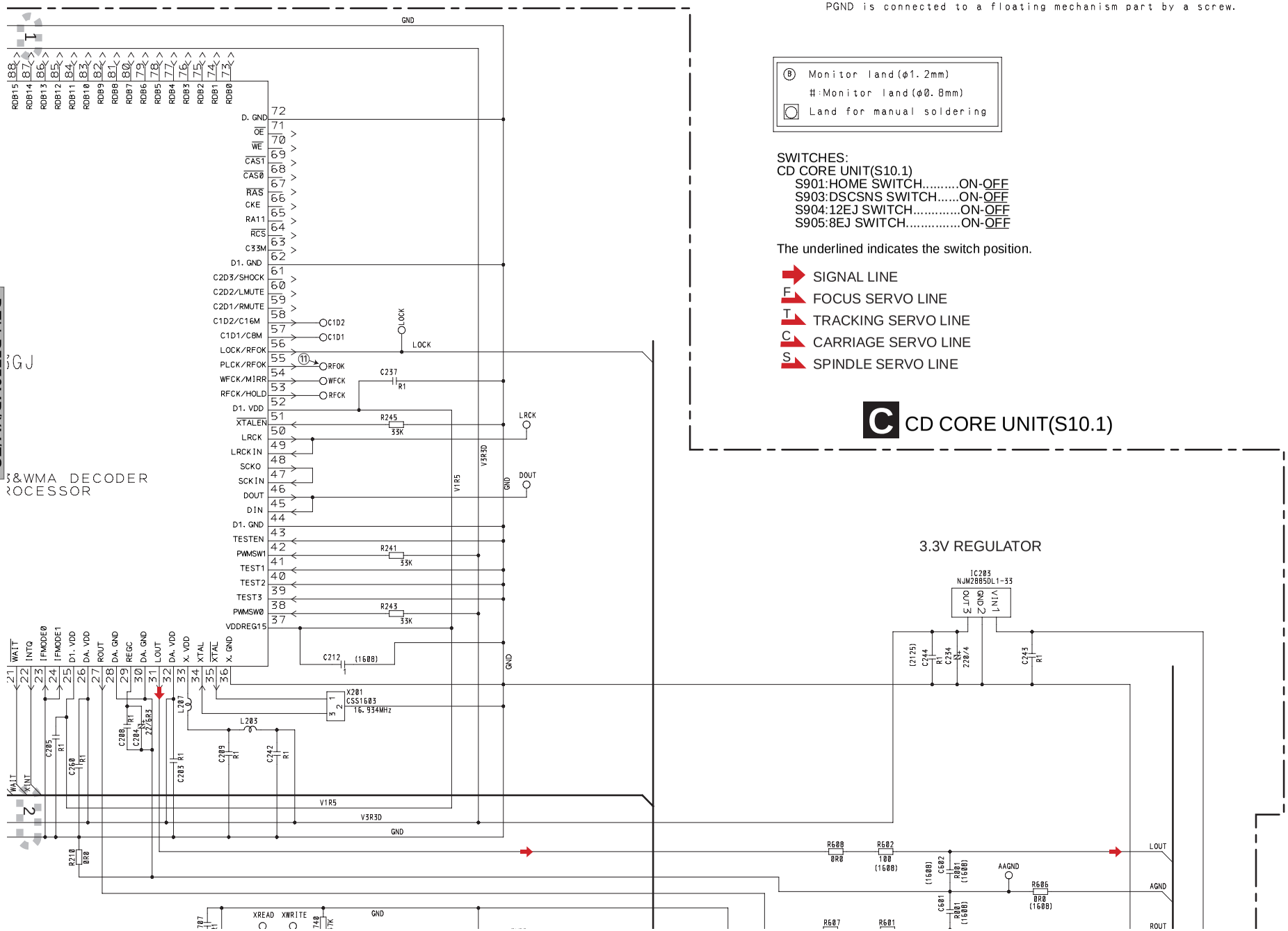
SWITCHES:
CD CORE UNIT(S10.1)
S901:HOME SWITCH.....ON-OFF
S903:DSCSNS SWITCH.....ON-OFF
S904:12EJ SWITCH.....ON-OFF
S905:8EJ SWITCH.....ON-OFF

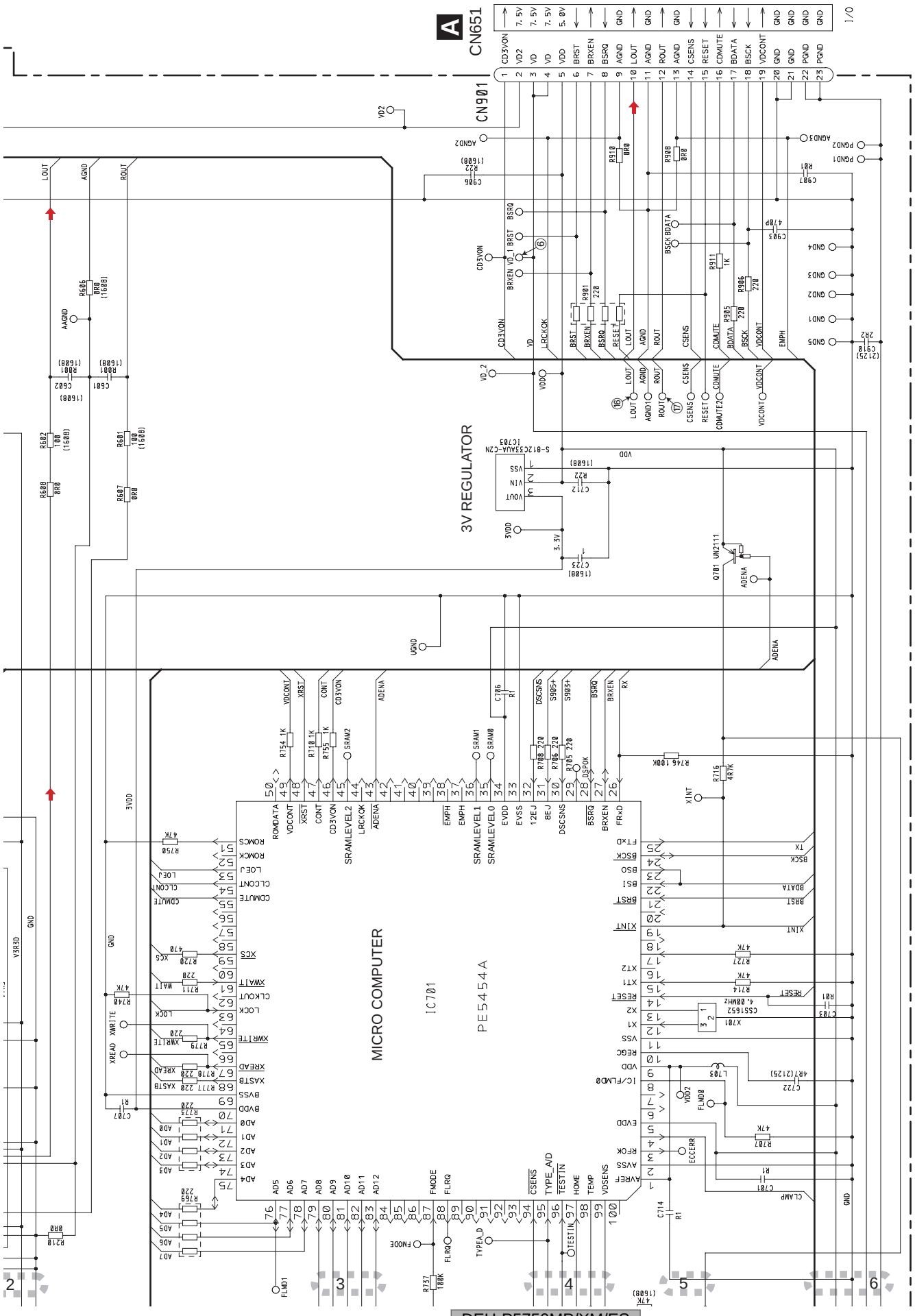
The underlined indicates the switch position.

SIGNAL LINE
F FOCUS SERVO LINE
T TRACKING SERVO LINE
C CARRIAGE SERVO LINE
S SPINDLE SERVO LINE

C CD CORE UNIT(S10.1)

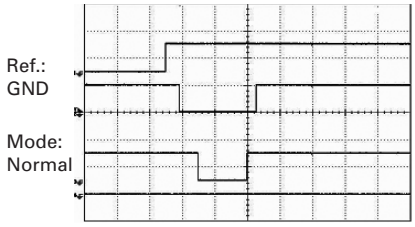
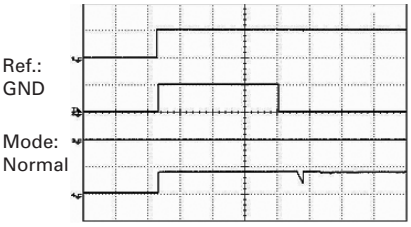
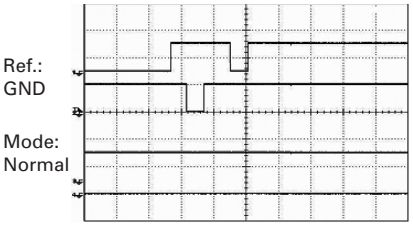
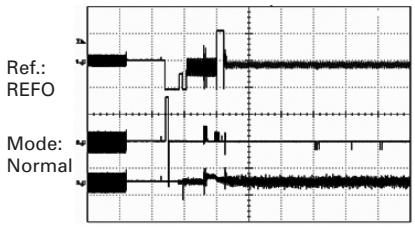
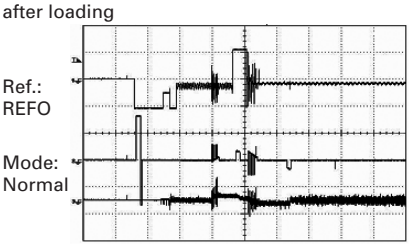
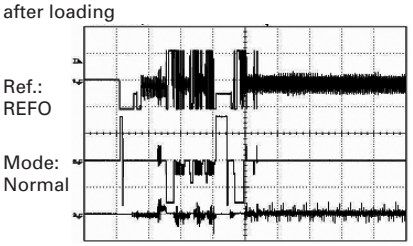
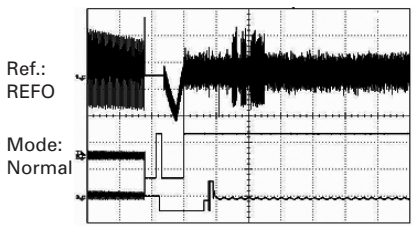
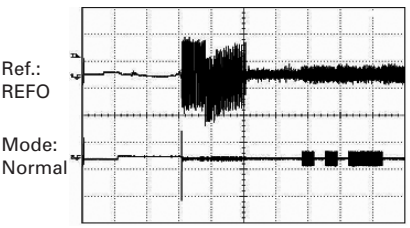
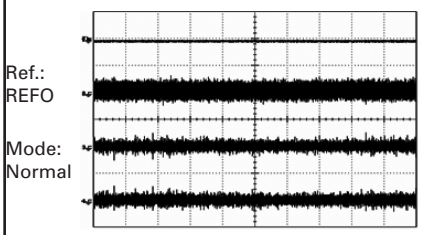
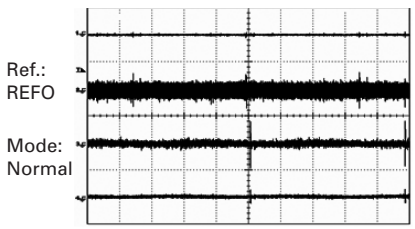
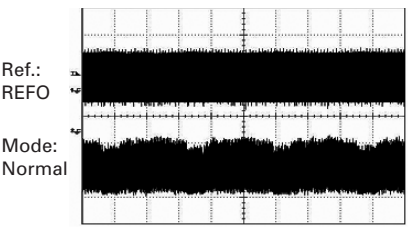
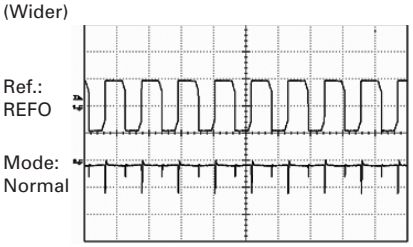
3.3V REGULATOR




CN651
CN901
3V REGULATOR
MICRO COMPUTER
IC701
PE5454A
C-a C-b
C-b

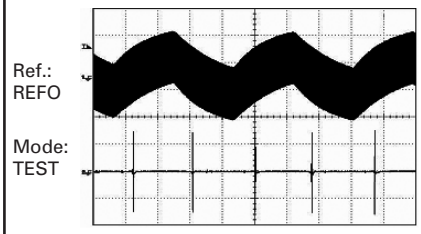
● Waveforms

Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65V)

① DSCSNS 5V/div 500ms/div ② 8SNS 5V/div ③ 12SNS 5V/div ④ LOEJ 5V/div 12 cm CD Loading operation  	① DSCSNS 5V/div 500ms/div ⑤ CLCONT 5V/div ④ LOEJ 5V/div ⑥ VD 10V/div 12 cm CD Loading operation  	① DSCSNS 5V/div 500ms/div ② 8SNS 5V/div ③ 12SNS 5V/div ④ LOEJ 5V/div 8 cm CD Loading operation 
⑦ SIN 1V/div 2s/div ⑧ CIN 500mV/div ⑨ TIN 500mV/div 12 cm CD-DA setup operation after loading  	⑦ SIN 1V/div 1s/div ⑧ CIN 500mV/div ⑨ TIN 500mV/div 12 cm CD-ROM(1 session) setup operation after loading  	⑦ SIN 1V/div 2s/div ⑧ CIN 500mV/div ⑨ TIN 500mV/div 12 cm CD-ROM(3 sessions) setup operation after loading 
⑩ FIN 200mV/div 500ms/div ⑪ RFOK 2V/div ⑦ SIN 2V/div 12 cm CD-DA Source On setup operation  	⑫ TE 500mV/div 200ms/div ⑬ FE 500mV/div Source On setup operation  	⑬ FE 500mV/div 20ms/div ⑩ FIN 500mV/div ⑫ TE 500mV/div ⑨ TIN 500mV/div CD-DA Play operation 
⑬ FE 500mV/div 20ms/div ⑩ FIN 500mV/div ⑫ TE 500mV/div ⑨ TIN 500mV/div CD-ROM play operation(Regular track Jump)  	⑭ MDX 1V/div 50ms/div ⑦ SIN 200mV/div Spindle waveform during play operation  	⑭ MDX 2V/div 5µs/div ⑦ SIN 1V/div Spindle waveform during play operation (Wider) 

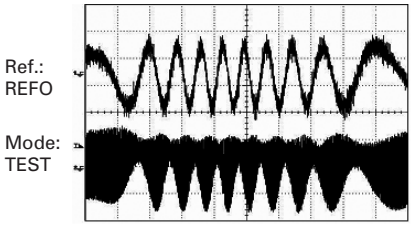
⑩ FIN 500mV/div 200ms/div
⑬ FE 500mV/div

Focus Search waveform



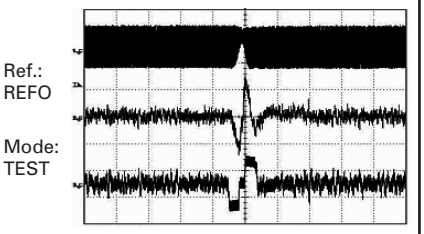
⑫ TE 500mV/div 2ms/div
⑮ RFAGC 500mV/div

Track Open waveform



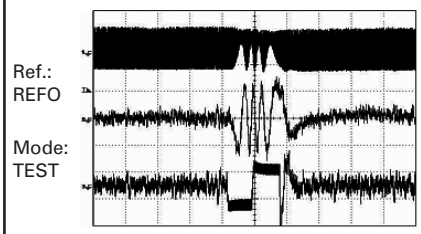
⑮ RFAGC 1V/div 500µs/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

1 Track Jump waveform



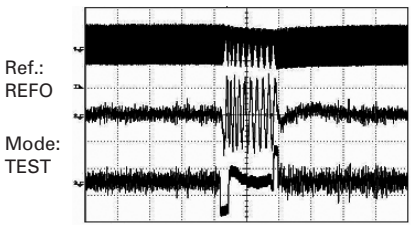
⑮ RFAGC 1V/div 500µs/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

4 Tracks Jump waveform



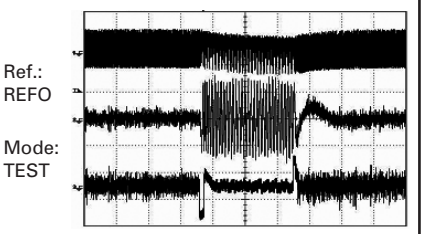
⑮ RFAGC 1V/div 1ms/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

10 Tracks Jump waveform



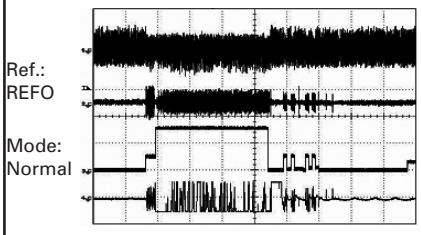
⑮ RFAGC 1V/div 2ms/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

32 Tracks Jump waveform



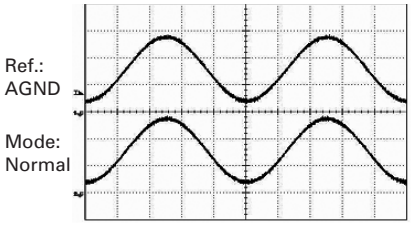
⑮ RFAGC 1V/div 200ms/div
⑫ TE 1V/div
⑧ CIN 500mV/div
⑦ SIN 2V/div

Search operation(Outter to Inner)



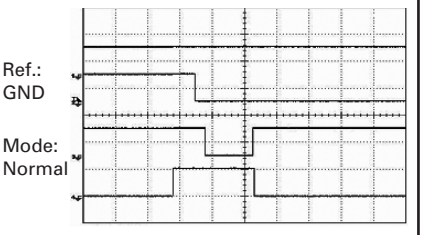
⑯ LOUT 1V/div 200µs/div
⑰ ROUT 1V/div

Analog audio waveform



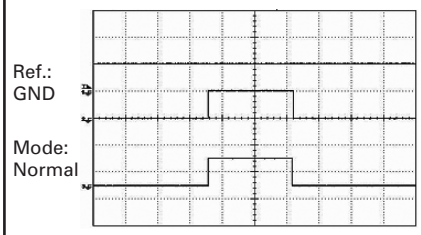
① DSCSNS 5V/div 500ms/div
② 8SNS 5V/div
③ 12SNS 5V/div
④ LOEJ 5V/div

12 cm CD Eject operation



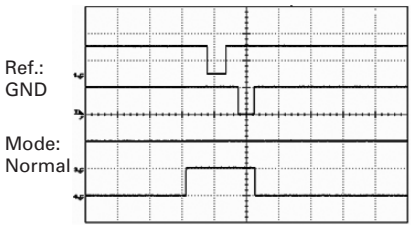
① DSCSNS 5V/div 500ms/div
⑤ CLCONT 5V/div
④ LOEJ 5V/div

12 cm CD Eject operation



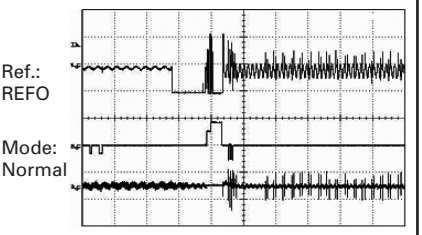
① DSCSNS 5V/div 500ms/div
② 8SNS 5V/div
③ 12SNS 5V/div
④ LOEJ 5V/div

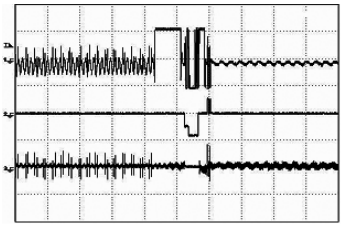
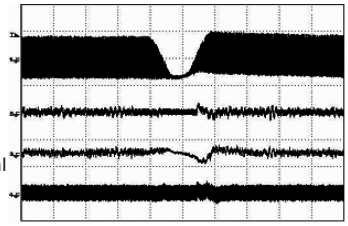
8 cm CD Eject operation



⑦ SIN 1V/div 500ms/div
⑧ CIN 500mV/div
⑨ TIN 500mV/div

CD-DA >> CD-ROM mode change(Band key)



⑦ SIN 1V/div 500ms/div ⑧ CIN 500mV/div ⑨ TIN 500mV/div CD-ROM >> CD-DA mode change(Band key) Ref.: REFO Mode: Normal 	⑮ RFAGC 1V/div 500µs/div ⑨ TIN 1V/div ⑫ TE 1V/div ⑩ FIN 1V/div Black dot(800µm) during play Ref.: REFO Mode: Normal 	

A

B

C

D

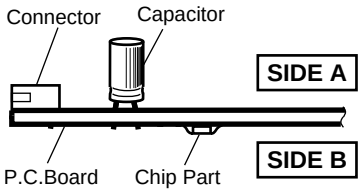
E

F

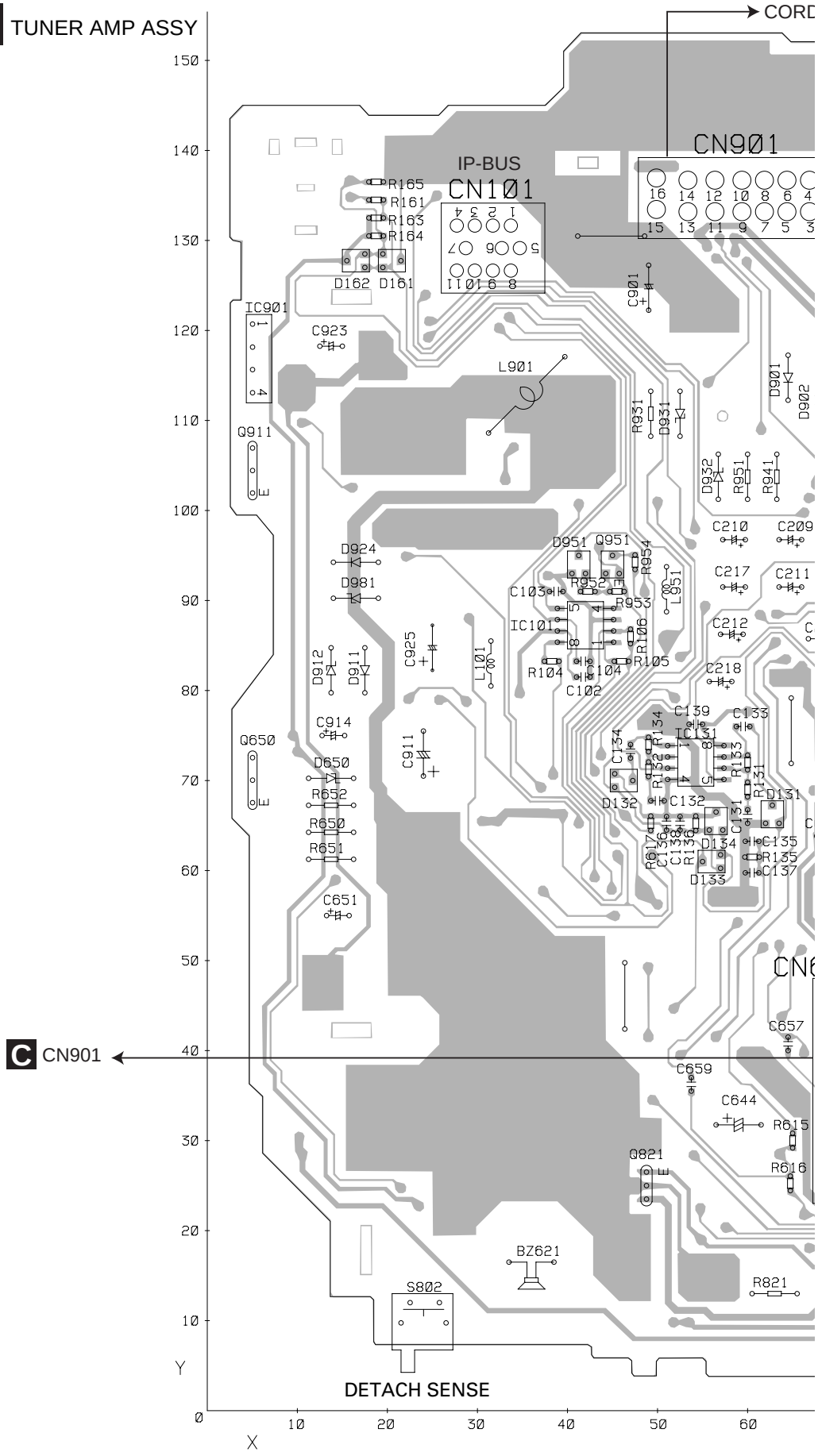
4. PCB CONNECTION DIAGRAM
4.1 TUNER AMP ASSY

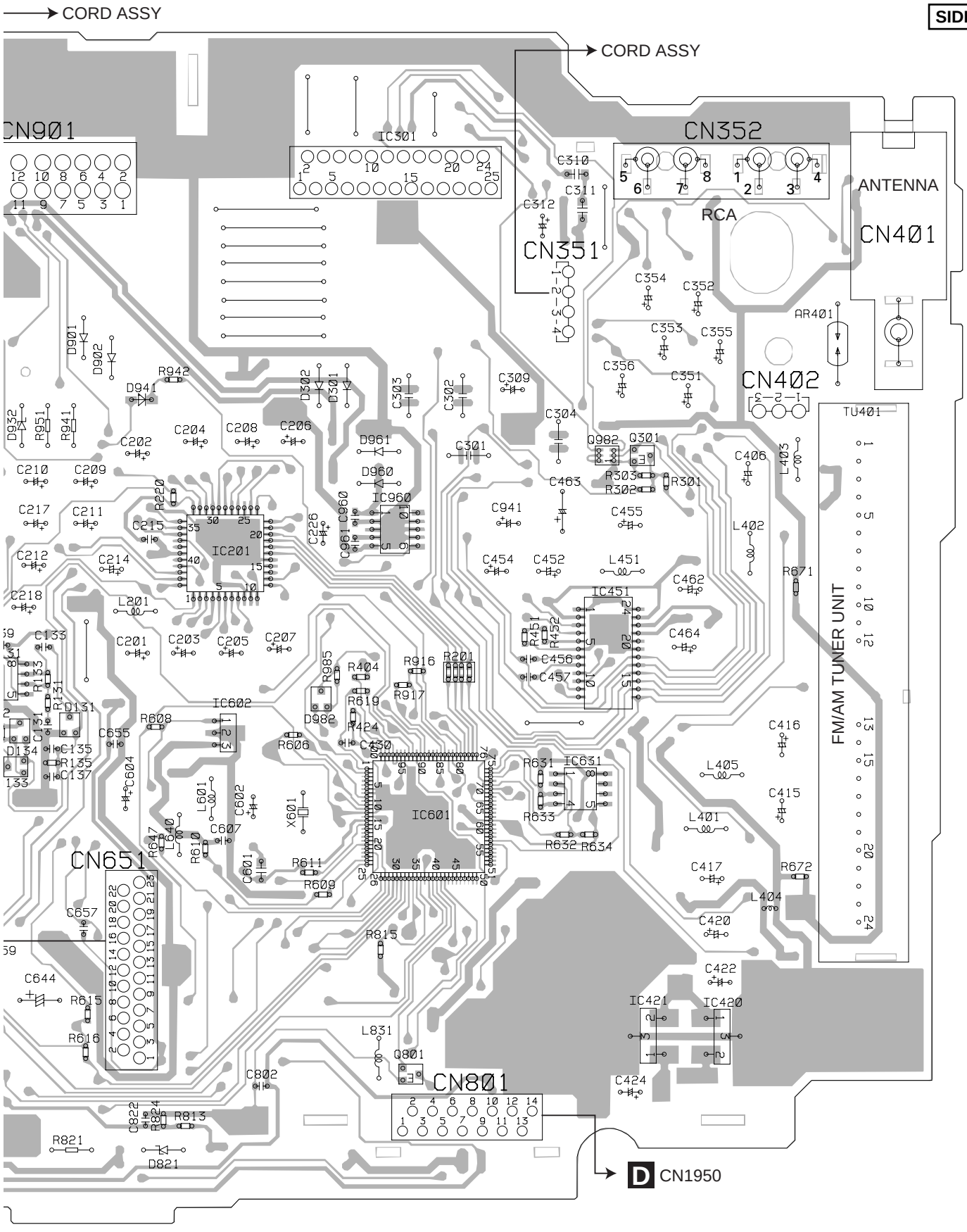
NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams

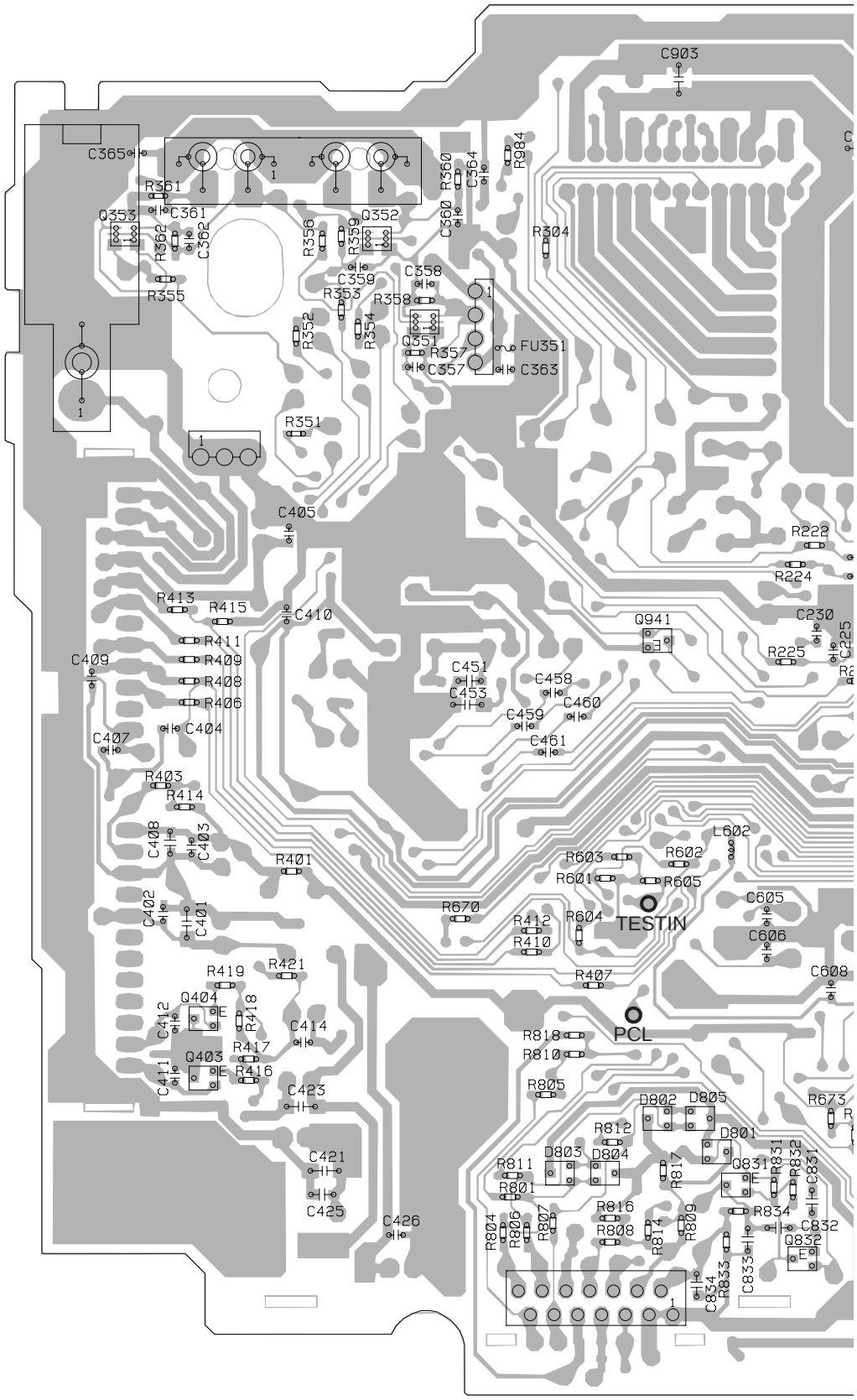


A TUNER AMP ASSY

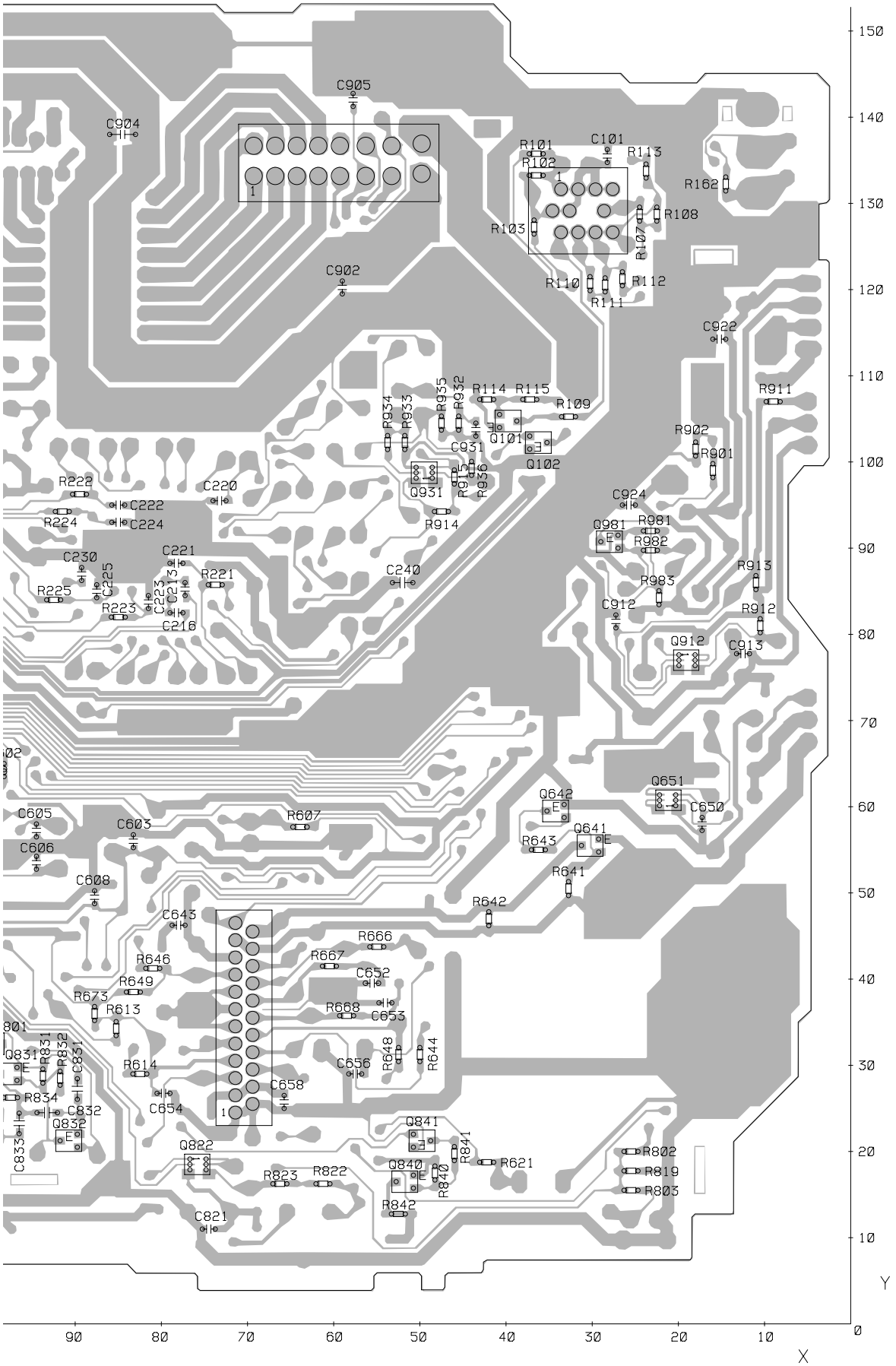



CORD ASSY
SIDE A
CORD ASSY
CN901
IC301
CN352
ANTENNA
RCA
CN401
CN351
AR401
CN402
TU401
FM/AM TUNER UNIT
IC201
IC960
IC451
IC602
IC601
IC631
IC421
IC420
CN651
CN801
D CN1950
FRONT

A TUNER AMP ASSY



SIDE B

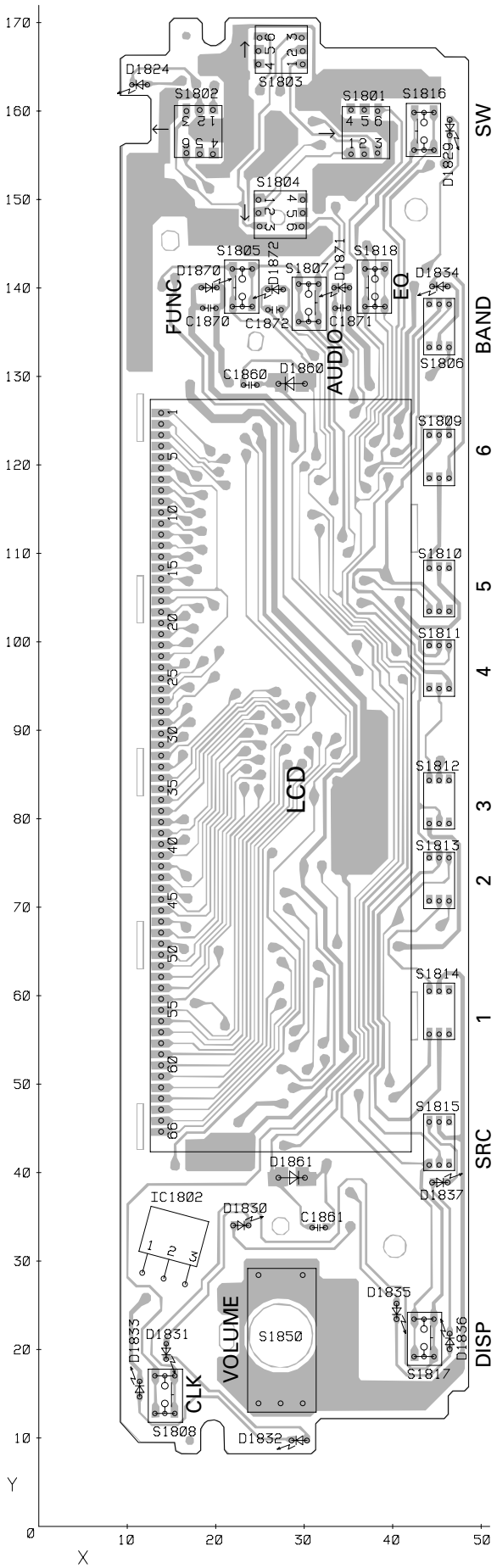

C905
C904
C902
C101
R101
R102
R113
R162
R108
R103
R107
R110
R112
R111
C922
R911
R914
R915
R936
R934
R933
R935
R932
R114
R115
R109
Q101
Q102
C931
Q931
R902
R901
C924
Q981
R981
R982
R983
C912
R913
R912
C913
Q912
R222
C220
C222
R224
C224
C230
C221
R225
C225
C223
C213
R221
R223
C216
C240
Q651
C650
Q642
Q641
R643
R641
R642
C605
C603
R607
C606
C608
C643
R666
R667
R646
C652
R649
R673
R668
C653
R613
R614
C656
R648
R644
C658
C654
Q831
R831
R832
C831
R834
C832
Q832
C833
Q841
R841
Q822
R823
R822
Q840
R621
R840
R842
C821
R802
R819
R803
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
Y
X
90
80
70
60
50
40
30
20
10

A

4.2 KEYBOARD UNIT

B KEYBOARD UNIT

SIDE A

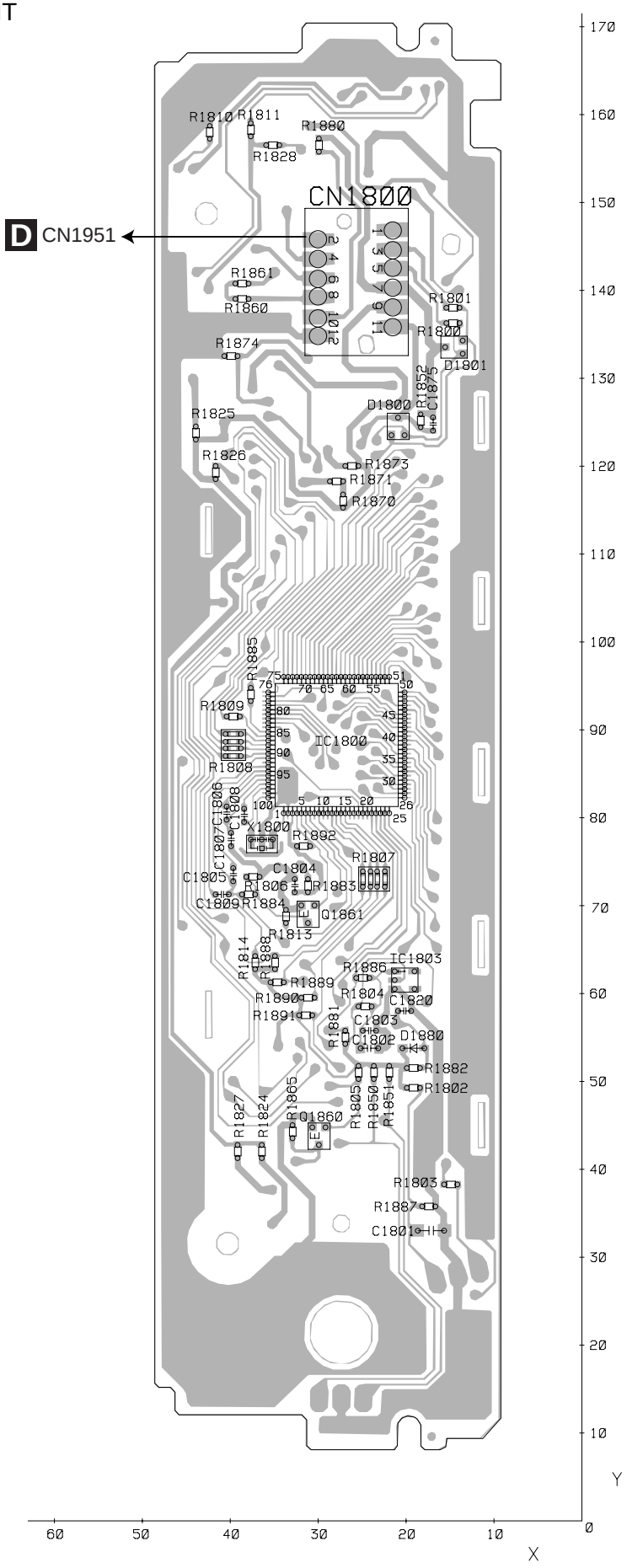


B

B KEYBOARD UNIT

SIDE B

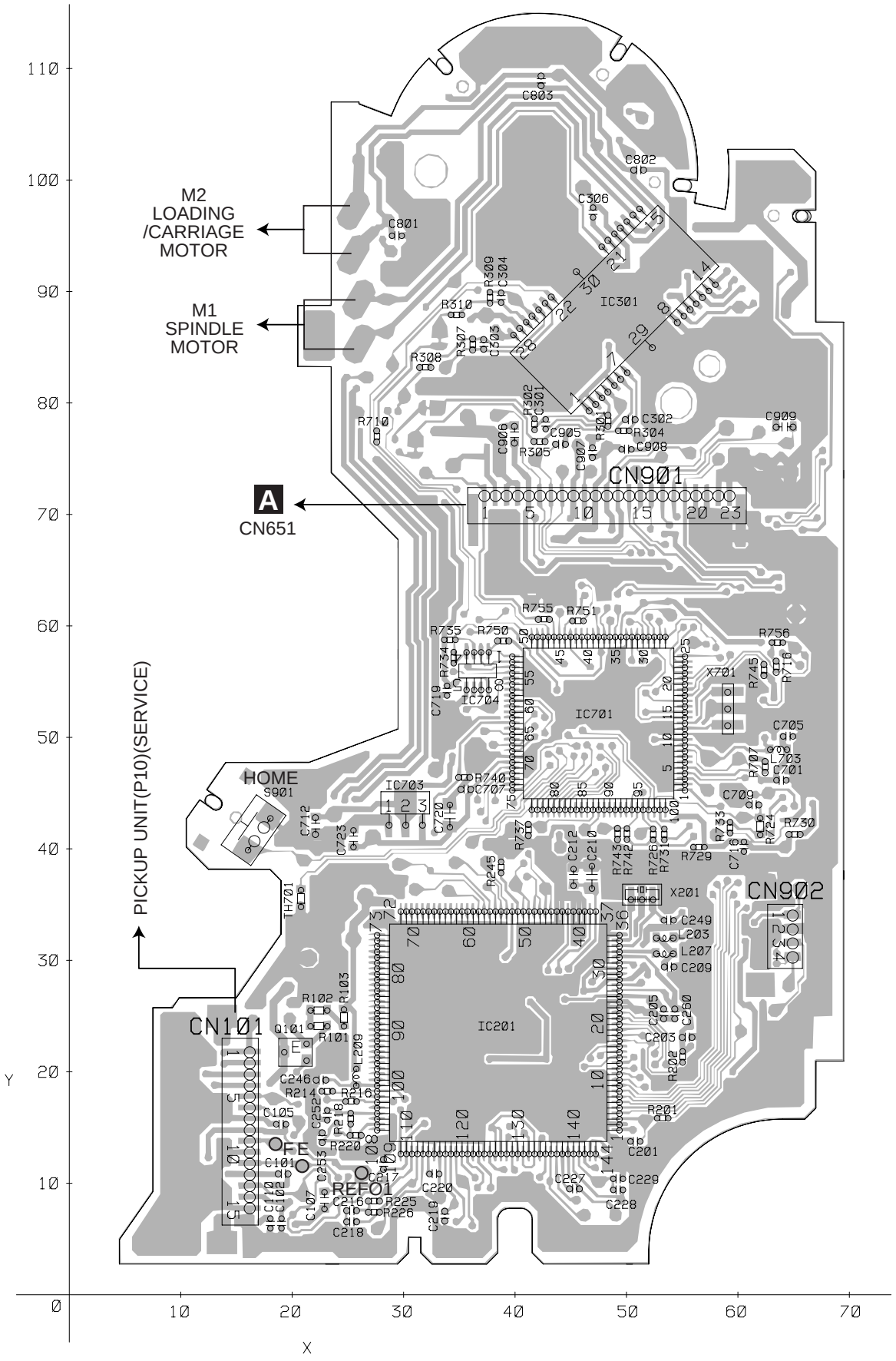
D CN1951



4.3 CD MECHAMODULE UNIT

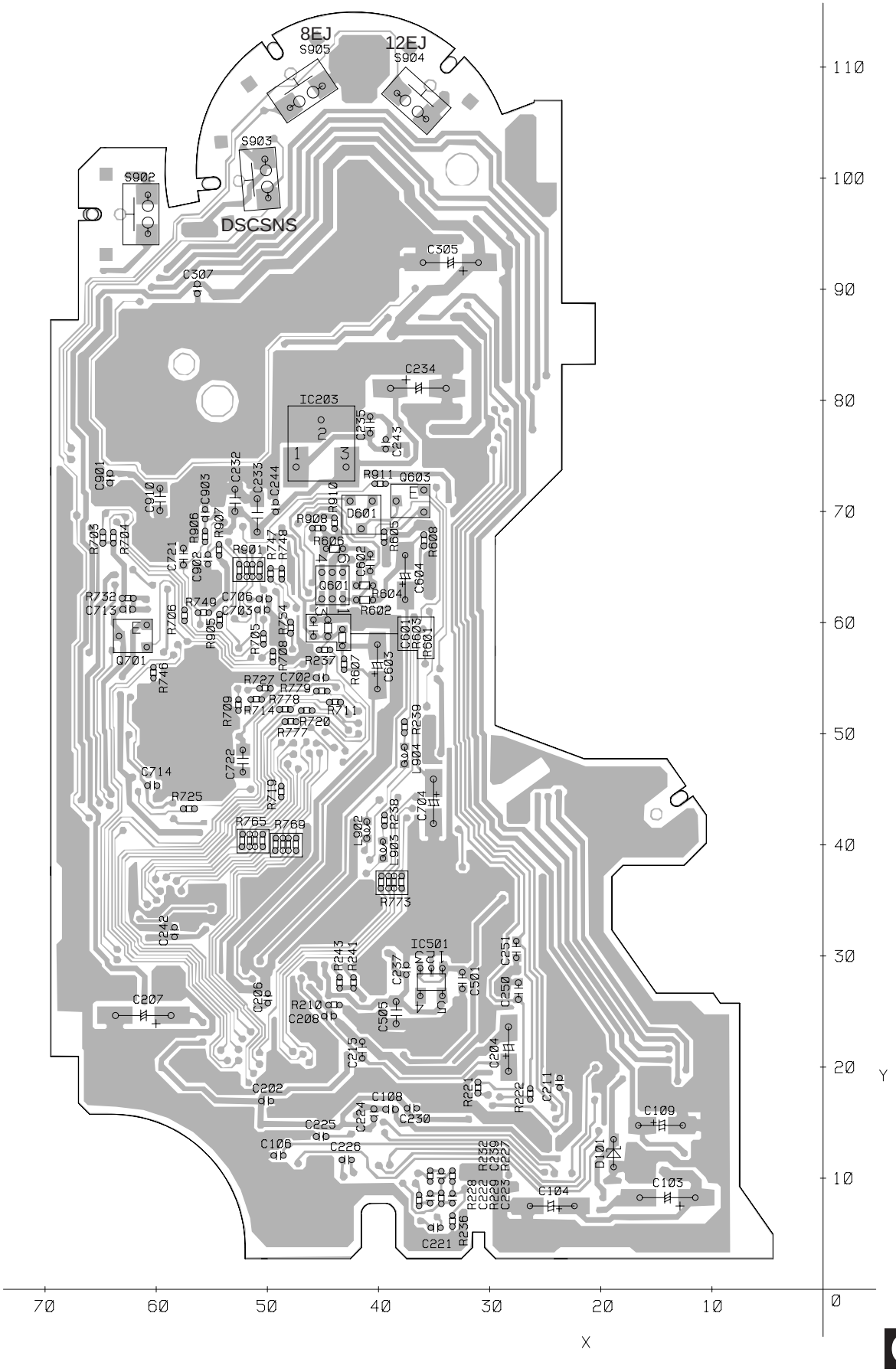
C CD CORE UNIT(S10.1)

SIDE A



C CD CORE UNIT(S10.1)

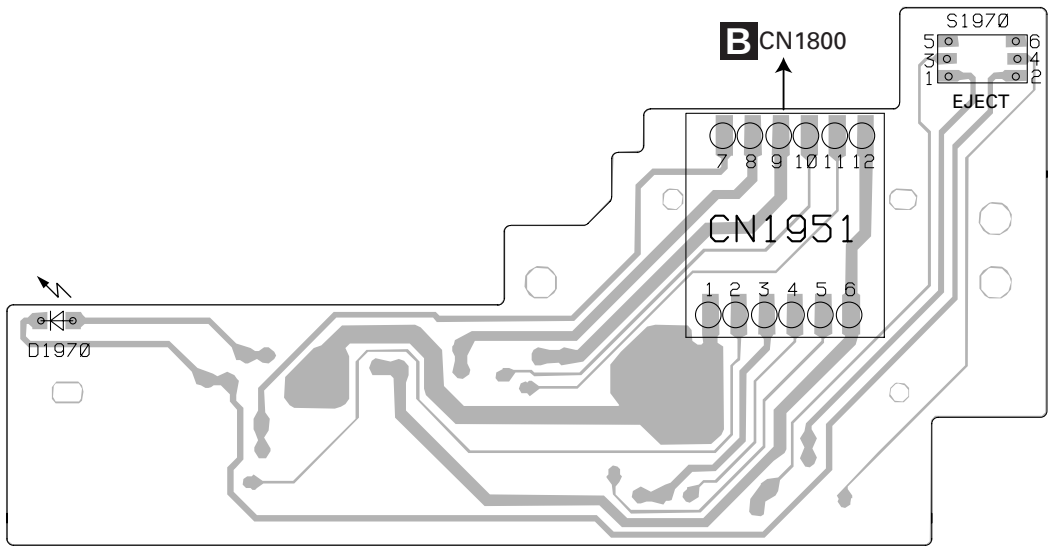
SIDE B



4.4 PANEL UNIT

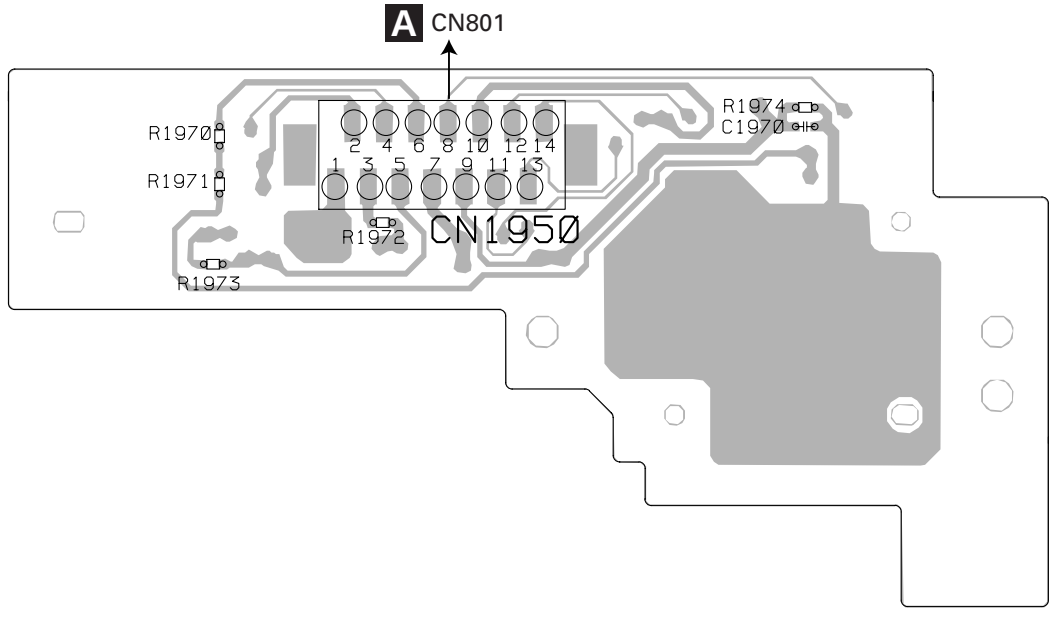
D PANEL UNIT

SIDE A



D PANEL UNIT

SIDE B



D

5. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

  Chip Resistor

  RS1/◯S◯◯◯J,RS1/◯◯S◯◯◯J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....
- *The ⚠ mark found on some component parts indicatesthe importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

A

Unit Number:XWM7091
Unit Name:Tuner Amp Assy

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 101	(A,42,87) IC	HA12240FP
IC 131	(A,54,72) IC	NJM4558MD
IC 201	(A,82,88) IC	PML009A
IC 301	(A,92,133) IC	PAL007A
IC 420	(A,147,27) IC	NJM2391DL1-33
IC 421	(A,133,27) IC	NJM2391DL1-05
IC 601	(A,108,55) IC	PEG063A
IC 602	(A,82,65) IC	S-80835CNUA-B8U
IC 901	(A,5,121) IC	NJM2388F84
Q 101	(B,40,105) Transistor	2SA1576
Q 102	(B,36,102) Transistor	DTC114EU
Q 301	(A,135,100) Transistor	DTC124EU
Q 351	(B,131,120) Transistor	UMH3N
Q 352	(B,136,129) Transistor	UMH3N
Q 353	(B,162,129) Transistor	UMH3N
Q 403	(B,154,40) Transistor	2SA1576
Q 404	(B,154,47) Transistor	2SA1576
Q 641	(B,30,56) Transistor	2SA1577
Q 642	(B,34,60) Transistor	DTC114EU
Q 650	(A,5,68) Transistor	2SD2396
Q 651	(B,21,61) Transistor	UMD2N
Q 801	(A,106,23) Transistor	DTC143EU
Q 821	(A,47,25) Transistor	2SD1767
Q 822	(B,76,19) Transistor	UMD2N
Q 831	(B,98,29) Transistor	2SA1576
Q 832	(B,91,21) Transistor	DTC114EU
Q 840	(B,52,17) Transistor	2SA1576
Q 841	(B,50,21) Transistor	DTC114EU
Q 911	(A,5,102) Transistor	2SD2396
Q 912	(B,19,77) Transistor	UMD2N
Q 931	(B,50,99) Transistor	UMX1N
Q 941	(B,106,86) Transistor	DTC114EU
Q 951	(A,45,94) Transistor	2SA1576
Q 981	(B,28,91) Transistor	2SC4081
Q 982	(A,130,100) Transistor	UMD2N
D 131	(A,63,66) Diode Network	DA204U
D 132	(A,46,70) Diode Network	DA204U
D 133	(A,56,61) Diode	DAN202U
D 301	(A,98,111) Diode	S5688G
D 302	(A,94,111) Diode	S5688G
D 650	(A,11,70) Diode	HZS7L(C3)
D 801	(B,100,33) Diode Network	DA204U
D 802	(B,106,36) Diode	DAN202U
D 803	(B,116,30) Diode	DAP202U
D 804	(B,112,30) Diode	DAN202U
D 805	(B,102,36) Diode	DAP202U
D 821	(A,77,13) Diode	HZS11L(A1)
D 901	(A,65,117) Diode	S5688G
D 902	(A,68,115) Diode	S5688G
D 911	(A,18,85) Diode	S5688G
D 912	(A,14,80) Diode	HZS6L(B1)
D 931	(A,53,113) Diode	HZS7L(A1)
D 932	(A,57,101) Diode	HZS7L(C3)
D 941	(A,72,107) Diode	MA111
D 951	(A,41,94) Diode	DAN202U
D 981	(A,19,90) Diode	HZS9L(A2)
D 982	(A,94,70) Diode	DAN202U
L 101	(A,32,81) Inductor	LAU2R2K
L 201	(A,74,81) Ferri-Inductor	LAU4R7K
L 401	(A,145,53) Inductor	LAUR47K
L 402	(A,148,90) Inductor	LAU1R0K
L 403	(A,154,97) Ferri-Inductor	LAU4R7K
L 601	(A,81,60) Ferri-Inductor	LAU100K
L 640	(A,77,50) Ferri-Inductor	LAU100K
L 831	(A,102,22) Inductor	LAU2R2K
L 901	(A,31,108) Choke Coil 600µH	CTH1280
L 951	(A,51,89) Inductor	LAU2R2K
X 601	(A,92,58) Radiator 10.00MHz	CSS1599
S 802	(A,21,10) Switch(DETACH SENSE)	CSN1039
⚠ FU351	(B,122,117) Fuse 3A	CEK1286
BZ621	(A,36,17) Buzzer	CPV1062
AR401	(A,159,119) Surge Protector	DSP-201M-S00B
⚠	Fuse 10A	CEK1208
	FM/AM Tuner Unit	CWE1802

RESISTORS

R 101	(B,37,136)	RS1/16S101J
R 102	(B,37,133)	RS1/16S620J
R 103	(B,37,127)	RS1/16S101J
R 104	(A,38,83)	RS1/16S102J
R 105	(A,46,83)	RS1/16S472J
R 106	(A,47,86)	RS1/16S472J
R 107	(B,25,129)	RS1/16S821J
R 108	(B,23,129)	RS1/16S223J

Circuit Symbol and No.		Part No.	Circuit Symbol and No.		Part No.
R 109	(B,33,105)	RS1/16S222J	R 611	(A,93,48)	RS1/16S473J
R 110	(B,30,121)	RS1/16S821J	R 613	(B,85,34)	RS1/16S221J
R 111	(B,29,121)	RS1/16S223J	R 614	(B,83,29)	RS1/16S682J
R 112	(B,27,121)	RS1/16S102J	R 615	(A,65,30)	RS1/16S682J
R 113	(B,24,134)	RS1/16S102J	R 616	(A,65,25)	RS1/16S221J
R 114	(B,42,107)	RS1/16S223J	R 621	(B,42,19)	RS1/16S102J
R 115	(B,37,107)	RS1/16S472J	R 631	(A,122,60)	RS1/16S104J
R 131	(A,60,69)	RS1/16S563J	R 641	(B,33,51)	RS1/16S103J
R 132	(A,49,71)	RS1/16S563J	R 643	(B,36,55)	RS1/16S182J
R 133	(A,60,72)	RS1/16S104J	R 646	(B,81,41)	RS1/16S102J
R 134	(A,49,74)	RS1/16S104J	R 647	(A,74,52)	RS1/16S102J
R 135	(A,61,62)	RS1/16S474J	R 648	(B,52,31)	RS1/16S222J
R 136	(A,54,65)	RS1/16S474J	R 649	(B,83,39)	RS1/16S104J
R 201	(A,111,73)	RAB4C102J	R 650	(A,11,64)	RD1/4PU0R0J
R 220	(A,76,95)	RS1/16S102J	R 651	(A,16,61)	RD1/4PU271J
R 221	(B,74,86)	RS1/16S102J	R 652	(A,16,67)	RD1/4PU221J
R 222	(B,90,96)	RS1/16S471J	R 666	(B,55,44)	RS1/16S104J
R 223	(B,85,82)	RS1/16S471J	R 667	(B,61,42)	RS1/16S102J
R 224	(B,92,94)	RS1/16S471J	R 668	(B,59,36)	RS1/16S102J
R 225	(B,93,84)	RS1/16S471J	R 801	(B,122,28)	RS1/16S102J
R 301	(A,138,97)	RS1/16S103J	R 802	(B,26,20)	RS1/16S104J
R 302	(A,135,96)	RS1/16S331J	R 803	(B,26,16)	RS1/16S102J
R 303	(A,135,98)	RS1/16S103J	R 804	(B,122,24)	RS1/16S222J
R 304	(B,118,128)	RS1/16S153J	R 805	(B,118,39)	RS1/16S222J
R 351	(B,144,108)	RS1/16S471J	R 806	(B,120,24)	RS1/16S222J
R 352	(B,144,118)	RS1/16S471J	R 807	(B,117,25)	RS1/16S222J
R 353	(B,139,121)	RS1/16S471J	R 808	(B,111,23)	RS1/16S222J
R 354	(B,138,119)	RS1/16S471J	R 809	(B,104,25)	RS1/16S222J
R 355	(B,158,124)	RS1/16S821J	R 810	(B,115,43)	RS1/16S102J
R 356	(B,141,128)	RS1/16S821J	R 811	(B,121,30)	RS1/16S102J
R 357	(B,132,117)	RS1/16S223J	R 812	(B,111,34)	RS1/16S102J
R 358	(B,131,122)	RS1/16S223J	R 813	(A,77,16)	RS1/16S1R0J
R 359	(B,139,129)	RS1/16S223J	R 814	(B,107,24)	RS1/16S222J
R 360	(B,127,135)	RS1/16S223J	R 815	(A,102,38)	RS1/16S473J
R 361	(B,159,133)	RS1/16S223J	R 816	(B,111,26)	RS1/16S473J
R 362	(B,157,128)	RS1/16S223J	R 817	(B,105,31)	RS1/16S473J
R 401	(B,145,62)	RS1/16S0R0J	R 818	(B,115,45)	RS1/16S104J
R 403	(B,158,71)	RS1/16S681J	R 821	(A,61,13)	RD1/4PU391J
R 404	(A,99,72)	RS1/16S681J	R 822	(B,61,16)	RS1/16S391J
R 406	(B,155,80)	RS1/16S681J	R 823	(B,66,16)	RS1/16S391J
R 407	(B,113,50)	RS1/16S681J	R 824	(A,75,17)	RS1/16S472J
R 408	(B,155,82)	RS1/16S681J	R 831	(B,94,29)	RS1/16S473J
R 409	(B,155,84)	RS1/16S681J	R 832	(B,92,29)	RS1/16S102J
R 410	(B,119,54)	RS1/16S681J	R 833	(B,99,23)	RS1/16S222J
R 411	(B,155,86)	RS1/16S681J	R 840	(B,48,18)	RS1/16S103J
R 412	(B,119,56)	RS1/16S681J	R 841	(B,46,20)	RS1/16S103J
R 413	(B,157,90)	RS1/16S681J	R 901	(B,16,99)	RS1/16S102J
R 416	(B,149,40)	RS1/16S222J	R 902	(B,18,102)	RS1/16S103J
R 417	(B,149,42)	RS1/16S561J	R 911	(B,9,107)	RS1/16S391J
R 418	(B,150,46)	RS1/16S561J	R 912	(B,11,81)	RS1/16S222J
R 419	(B,152,50)	RS1/16S222J	R 913	(B,11,86)	RS1/16S223J
R 421	(B,145,51)	RS1/16S471J	R 914	(B,48,94)	RS1/16S104J
R 424	(A,98,67)	RS1/16S471J	R 915	(B,46,98)	RS1/16S104J
R 603	(B,110,64)	RS1/16S104J	R 916	(A,106,73)	RS1/16S104J
R 605	(B,107,61)	RS1/16S104J	R 931	(A,49,108)	RD1/4PU102J
R 606	(A,91,65)	RS1/16S104J	R 932	(B,46,105)	RS1/16S472J
R 607	(B,64,58)	RS1/16S822J	R 933	(B,52,102)	RS1/16S473J
R 608	(A,74,66)	RS1/16S102J	R 934	(B,54,102)	RS1/16S103J
R 609	(A,95,45)	RS1/16S102J	R 935	(B,48,105)	RS1/16S473J
R 610	(A,80,51)	RS1/16S104J	R 936	(B,44,99)	RS1/16S104J

Circuit Symbol and No.		Part No.
R 941	(A,63,101)	RD1/4PU102J
R 942	(A,76,110)	RS1/16S103J
R 951	(A,60,101)	RD1/4PU153J
R 952	(A,42,91)	RS1/16S472J
R 953	(A,46,91)	RS1/16S472J
R 954	(A,48,94)	RS1/16S102J
R 981	(B,23,92)	RS1/16S683J
R 982	(B,23,90)	RS1/16S683J
R 983	(B,22,84)	RS1/16S223J
R 984	(B,122,137)	RS1/16S102J

CAPACITORS

C 101	(B,28,136)	CKSRYB104K16
C 102	(A,42,82)	CKSRYB473K25
C 103	(A,39,91)	CKSRYB102K50
C 104	(A,42,83)	CKSRYB102K50
C 131	(A,60,66)	CKSRYB104K16
C 132	(A,50,68)	CKSRYB104K16
C 133	(A,60,76)	CKSRYB104K16
C 134	(A,47,73)	CKSRYB104K16
C 135	(A,61,63)	CKSRYB474K10
C 136	(A,51,65)	CKSRYB474K10
C 137	(A,61,60)	CCSRCH101J50
C 138	(A,53,65)	CCSRCH101J50
C 139	(A,54,76)	CKSRYB103K50
C 201	(A,73,75)	CEJQ4R7M35
C 202	(A,73,100)	CEJQ4R7M35
C 203	(A,76,75)	CEJQ4R7M35
C 204	(A,80,102)	CEJQ4R7M35
C 205	(A,82,75)	CEJQ4R7M35
C 206	(A,90,102)	CEJQ4R7M35
C 207	(A,88,76)	CEJQ4R7M35
C 208	(A,86,102)	CEJQ4R7M35
C 209	(A,66,97)	CEJQ1R0M50
C 210	(A,60,97)	CEJQ1R0M50
C 211	(A,66,92)	CEJQ1R0M50
C 212	(A,60,86)	CEJQ1R0M50
C 213	(B,77,85)	CKSRYB104K16
C 214	(A,69,86)	CEJQ470M16
C 215	(A,73,90)	CKSRYB105K10
C 216	(B,78,83)	CKSRYB104K16
C 217	(A,60,92)	CEJQ1R0M50
C 218	(A,58,81)	CEJQ1R0M50
C 220	(B,73,96)	CKSRYB152K50
C 221	(B,78,88)	CKSRYB152K50
C 222	(B,85,95)	CCSRCH120J50
C 223	(B,82,84)	CCSRCH120J50
C 224	(B,85,93)	CCSRCH120J50
C 225	(B,88,85)	CCSRCH120J50
C 226	(A,95,92)	CEJQ100M16
C 230	(B,89,87)	CKSRYB104K16
C 240	(B,52,86)	CKSQYB225K10
C 301	(A,115,100)	CFTNA224J50
C 302	(A,112,110)	CFTNA224J50
C 303	(A,105,110)	CFTNA224J50
C 304	(A,124,104)	CFTNA224J50
C 309	(A,117,108)	CEJQ330M10
C 310	(A,126,135)	CKSQYB225K10
C 311	(A,127,131)	CKSQYB225K10

Circuit Symbol and No.		Part No.
C 312	(A,122,130)	CEHAR100M16
C 351	(A,140,106)	CEJQ4R7M35
C 352	(A,142,118)	CEJQ4R7M35
C 353	(A,137,112)	CEJQ4R7M35
C 354	(A,135,119)	CEJQ4R7M35
C 355	(A,144,112)	CEJQ4R7M35
C 356	(A,132,108)	CEJQ4R7M35
C 402	(B,158,58)	CKSRYB104K16
C 405	(B,145,98)	CKSRYB103K50
C 406	(A,148,97)	CEJQ101M16
C 407	(B,164,75)	CCSRCH101J50
C 411	(B,157,41)	CKSRYB332K50
C 412	(B,157,46)	CKSRYB332K50
C 414	(B,143,44)	CKSRYB103K50
C 416	(A,152,65)	CEJQ470M10
C 417	(A,145,47)	CEJQ101M16
C 420	(A,143,40)	CEJQ470M10
C 422	(A,143,34)	CEJQ100M16
C 426	(B,134,24)	CKSRYB104K16
C 430	(A,98,64)	CCSRCH470J50
C 602	(A,86,55)	CEJQ4R7M35
C 603	(B,83,56)	CCSRCH101J50
C 604	(A,70,58)	CEJQ2R2M50
C 605	(B,95,57)	CCSRCH200J50
C 606	(B,95,54)	CCSRCH200J50
C 608	(B,88,50)	CKSRYB103K50
C 643	(B,78,46)	CKSRYB683K16
C 644	(A,59,32)	CEAT471M16
C 650	(B,17,58)	CKSRYB473K25
C 651	(A,13,55)	CEJQ101M16
C 652	(B,56,40)	CKSRYB152K50
C 653	(B,54,37)	CKSRYB152K50
C 654	(B,80,27)	CCSRCH470J50
C 821	(B,75,11)	CKSRYB473K25
C 822	(A,72,17)	CKSRYB473K25
C 832	(B,93,25)	CKSQYB105K16
C 901	(A,49,122) 3300µF/16V	CCH1486
C 902	(B,59,120)	CKSRYB104K25
C 903	(B,104,145)	CKSYB225K16
C 904	(B,85,138)	CKSYB225K16
C 911	(A,24,76) 470µF/16V	CCH1331
C 912	(B,27,82)	CKSRYB472K50
C 913	(B,13,78)	CKSRYB103K50
C 914	(A,13,75)	CEJQ470M10
C 922	(B,15,114)	CKSRYB103K50
C 923	(A,13,118)	CEJQ101M16
C 924	(B,26,95)	CKSRYB103K50
C 925	(A,25,82)	CEJQ221M10
C 931	(B,44,104)	CKSRYB104K16
C 941	(A,117,92)	CEJQ1R0M50

B

Unit Number:XWM7092
Unit Name:Keyboard Assy

MISCELLANEOUS

IC 1800	(B,28,88) IC	PD2072A
IC 1802	(A,12,29) IC	TSOP4840SB1
IC 1803	(B,20,62) IC	BD4834G

Circuit Symbol and No.		Part No.
Q 1860	(B,30,44) Transistor	DTC123JU
Q 1861	(B,31,69) Transistor	DTC114EU
D 1824	(A,11,163) LED	CL-195PG-CD
D 1829	(A,46,158) LED	CL-195PG-CD
D 1830	(A,23,34) LED	CL-195PG-CD
D 1831	(A,14,20) LED	CL-195PG-CD
D 1832	(A,29,10) LED	CL-195PG-CD
D 1833	(A,11,16) LED	CL-195PG-CD
D 1834	(A,45,140) LED	CL-195PG-CD
D 1835	(A,40,24) LED	CL-195PG-CD
D 1836	(A,46,21) LED	CL-195PG-CD
D 1837	(A,45,39) LED	CL-195PG-CD
D 1860	(A,29,129) White LED	NSCW505C-3388
D 1861	(A,29,40) White LED	NSCW505C-3388
D 1870	(A,19,140) LED	CL-190UB2-X
D 1871	(A,34,140) LED	CL-190UB2-X
D 1872	(A,27,140) LED	CL-190UB2-X
X 1800	(B,36,78) Ceramic Resonator 8.18MHz	CSS1631
S 1801	(A,36,158) Switch	CSG1107
S 1802	(A,19,158) Switch	CSG1107
S 1803	(A,27,166) Switch	CSG1107
S 1804	(A,27,149) Switch	CSG1107
S 1805	(A,23,140) Push Switch	CSG1155
S 1806	(A,45,136) Push Switch	CSG1174
S 1807	(A,31,138) Push Switch	CSG1155
S 1808	(A,14,15) Push Switch	CSG1155
S 1809	(A,45,121) Push Switch	CSG1174
S 1810	(A,45,106) Push Switch	CSG1174
S 1811	(A,45,97) Push Switch	CSG1174
S 1812	(A,45,82) Push Switch	CSG1174
S 1813	(A,45,73) Push Switch	CSG1174
S 1814	(A,45,58) Push Switch	CSG1174
S 1815	(A,45,43) Push Switch	CSG1174
S 1816	(A,44,158) Push Switch	CSG1155
S 1817	(A,44,21) Push Switch	CSG1155
S 1818	(A,38,140) Push Switch	CSG1155
S 1850	(A,27,21) Encoder(VOLUME)	XSD7001
	LCD	XAW7013

RESISTORS

R 1800	(B,15,136)	RS1/16S222J
R 1801	(B,15,138)	RS1/16S222J
R 1802	(B,19,49)	RS1/16S121J
R 1803	(B,15,38)	RS1/16S2R2J
R 1804	(B,25,59)	RS1/16S822J
R 1805	(B,25,51)	RS1/16S472J
R 1806	(B,37,73)	RS1/16S1801D
R 1807	(B,24,73)	RAB4C681J
R 1808	(B,40,88)	RAB4C681J
R 1809	(B,40,92)	RS1/16S681J
R 1810	(B,42,158)	RS1/16S151J
R 1811	(B,38,158)	RS1/16S181J
R 1813	(B,34,69)	RS1/16S473J
R 1814	(B,37,64)	RS1/16S473J
R 1824	(B,36,42)	RS1/16S560J
R 1825	(B,44,124)	RS1/16S560J
R 1826	(B,42,119)	RS1/16S560J
R 1827	(B,39,42)	RS1/16S560J
R 1828	(B,35,157)	RS1/16S560J
R 1850	(B,24,51)	RS1/16S103J
R 1860	(B,39,139)	RS1/16S470J
R 1861	(B,39,141)	RS1/16S820J
R 1865	(B,33,44)	RS1/16S181J
R 1870	(B,27,116)	RS1/16S221J
R 1871	(B,28,118)	RS1/16S271J
R 1873	(B,26,120)	RS1/16S680J
R 1874	(B,40,133)	RS1/16S470J
R 1880	(B,30,157)	RS1/16S473J
R 1881	(B,27,55)	RS1/16S473J
R 1883	(B,31,72)	RS1/16S3300D
R 1884	(B,38,71)	RS1/16S1001D
R 1885	(B,38,94)	RS1/16S681J
R 1886	(B,25,62)	RS1/16S102J
R 1887	(B,17,36)	RS1/16S103J
R 1888	(B,35,64)	RS1/16S104J
R 1889	(B,35,61)	RS1/16S104J
R 1890	(B,31,60)	RS1/16S104J
R 1891	(B,31,58)	RS1/16S104J
R 1892	(B,32,77)	RS1/16S472J

CAPACITORS

C 1801	(B,17,33)	CKSYF106Z10
C 1802	(B,24,54)	CKSQYB225K10
C 1804	(B,33,72)	CKSRYB104K16
C 1805	(B,40,74)	CKSRYB104K16
C 1806	(B,40,81)	CKSRYB104K16
C 1807	(B,40,78)	CKSRYB104K16
C 1808	(B,38,80)	CKSRYB104K16
C 1809	(B,41,71)	CKSRYB104K16
C 1870	(A,19,138)	CKSRYF104Z25
C 1871	(A,34,138)	CKSRYF104Z25
C 1872	(A,27,138)	CKSRYF104Z25

D

Unit Number:CWM8758
Unit Name:Panel Unit

MISCELLANEOUS

D 1970	LED	CL220PGC
S 1970	Push Switch(EJECT)	CSG1112

RESISTORS

R 1970		RS1/16S101J
R 1971		RS1/16S101J
R 1972		RS1/16S0R0J

CAPACITORS

C 1970		CKSRYB104K16

C

Unit Number:CWX3096
Unit Name:CD Core Unit(S10.1)

MISCELLANEOUS

IC 201	(A,39,24) IC	UPD63763GJ

Circuit Symbol and No.			Part No.
IC 203	(B,45,78)	IC	NJM2885DL1-33
IC 301	(A,49,88)	IC	BA5835FP
IC 701	(A,48,51)	IC	PE5454A
IC 703	(A,30,44)	IC	S-812C33AUA-C2N
Q 101	(A,20,22)	Transistor	2SA1577
Q 701	(B,62,59)	Transistor	UN2111
L 203	(A,53,32)	Inductor	CTF1389
L 207	(A,53,31)	Inductor	CTF1389
L 209	(A,26,20)	Inductor	CTF1389
L 703	(A,64,49)	Inductor	CTF1389
X 201	(A,51,35)	Ceramic Resonator 16.934MHz	CSS1603
X 701	(A,59,53)	Ceramic Resonator 4.00MHz	CSS1652
S 901	(A,15,43)	Switch(HOME)	CSN1067
S 903	(B,53,100)	Switch(DSCSNS)	CSN1068
S 904	(B,35,108)	Switch(12EJ)	CSN1067
S 905	(B,48,109)	Switch(8EJ)	CSN1067

RESISTORS

R 101	(A,22,24)	RS1/10SR2R4J
R 102	(A,22,26)	RS1/10SR2R4J
R 103	(A,25,25)	RS1/10SR2R7J
R 201	(A,53,16)	RS1/16SS102J
R 202	(A,55,21)	RS1/16SS333J
R 221	(B,31,18)	RS1/16SS103J
R 222	(B,26,18)	RS1/16SS103J
R 225	(A,27,8)	RS1/16SS103J
R 226	(A,27,7)	RS1/16SS393J
R 227	(B,33,10)	RS1/16SS562J
R 228	(B,36,8)	RS1/16SS122J
R 229	(B,34,8)	RS1/16SS472J
R 232	(B,35,10)	RS1/16SS122J
R 241	(B,42,28)	RS1/16SS333J
R 243	(B,44,28)	RS1/16SS333J
R 245	(A,39,38)	RS1/16SS333J
R 301	(A,48,78)	RS1/16SS183J
R 302	(A,42,78)	RS1/16SS822J
R 304	(A,50,78)	RS1/16SS183J
R 305	(A,42,77)	RS1/16SS822J
R 307	(A,36,85)	RS1/16SS183J
R 308	(A,32,83)	RS1/16SS183J
R 309	(A,38,89)	RS1/16SS183J
R 310	(A,35,88)	RS1/16SS183J
R 601	(B,43,59)	RS1/16S101J
R 602	(B,41,62)	RS1/16S101J
R 606	(B,44,67)	RS1/16S0R0J
R 607	(B,43,56)	RS1/16SS0R0J
R 608	(B,36,67)	RS1/16SS0R0J
R 705	(B,50,59)	RS1/16SS221J
R 706	(B,57,61)	RS1/16SS221J
R 707	(A,62,47)	RS1/16SS473J
R 708	(B,50,57)	RS1/16SS221J
R 710	(A,28,77)	RS1/16SS102J
R 711	(B,44,53)	RS1/16SS221J
R 714	(B,51,53)	RS1/16SS473J
R 716	(A,63,56)	RS1/16SS472J
R 719	(B,49,45)	RS1/16SS221J
R 720	(B,46,52)	RS1/16SS471J
R 724	(A,62,42)	RS1/16S473J
R 725	(B,57,43)	RS1/16SS222J
R 726	(A,52,41)	RS1/16SS103J
R 727	(B,50,54)	RS1/16SS473J
R 729	(A,57,40)	RS1/16SS223J
R 730	(A,65,41)	RS1/16SS473J
R 731	(A,53,41)	RS1/16SS104J
R 737	(A,41,42)	RS1/16SS104J
R 740	(A,35,46)	RS1/16SS473J
R 742	(A,50,41)	RS1/16SS104J
R 746	(B,60,56)	RS1/16SS104J
R 750	(A,39,59)	RS1/16SS473J
R 754	(B,48,60)	RS1/16SS102J
R 755	(A,43,61)	RS1/16SS102J
R 765	(B,51,40)	RAB4CQ221J
R 769	(B,48,40)	RAB4CQ221J
R 773	(B,39,37)	RAB4CQ221J
R 777	(B,48,51)	RS1/16SS221J
R 778	(B,48,52)	RS1/16SS221J
R 779	(B,45,54)	RS1/16SS221J
R 901	(B,52,65)	RAB4CQ221J
R 905	(B,54,60)	RS1/16SS221J
R 906	(B,56,68)	RS1/16SS221J
R 908	(B,45,69)	RS1/16SS0R0J
R 910	(B,44,69)	RS1/16SS0R0J
R 911	(B,40,73)	RS1/16SS102J

CAPACITORS

C 103	(B,14,8) 100µF/16V	CCH1504
C 105	(A,19,15)	CKSSYB104K10
C 108	(B,39,16)	CKSSYB104K10
C 110	(A,18,6)	CKSSYB104K10
C 201	(A,51,14)	CKSSYB102K50
C 202	(B,50,17)	CKSSYB104K10
C 203	(A,55,23)	CKSSYB104K10
C 204	(B,28,22)	CEVW220M6R3
C 205	(A,53,25)	CKSSYB104K10
C 208	(B,44,25)	CKSSYB104K10
C 209	(A,54,29)	CKSSYB104K10
C 212	(A,45,37)	CKSRYB105K10
C 216	(A,25,8)	CKSSYB332K50
C 217	(A,28,12)	CKSSYB104K10
C 218	(A,25,7)	CKSSYB473K10
C 219	(A,34,7)	CKSSYB104K10
C 220	(A,33,11)	CKSSYB182K50
C 221	(B,35,6)	CKSSYB104K10
C 222	(B,35,8)	CCSSCH560J50
C 223	(B,33,8)	CCSSCH4R0C50
C 224	(B,40,16)	CKSSYB104K10
C 225	(B,45,14)	CKSSYB103K16
C 226	(B,43,12)	CCSSCH680J50
C 227	(A,45,10)	CCSSCH470J50
C 228	(A,49,9)	CKSSYB103K16
C 234	(B,36,81)	CEVW221M4
C 237	(B,38,29)	CKSSYB104K10
C 239	(B,34,10)	CCSSCH220J50
C 242	(B,58,32)	CKSSYB104K10
C 243	(B,39,76)	CKSSYB104K10
C 244	(B,49,70)	CKSSYB104K10
C 246	(A,23,19)	CKSSYB104K10
C 251	(B,28,31)	CKSRYB102K50
C 260	(A,54,25)	CKSSYB104K10

Circuit Symbol and No.		Part No.
C 301	(A,43,78)	CKSSYB221K50
C 302	(A,50,79)	CKSSYB221K50
C 303	(A,37,85)	CKSSYB472K25
C 304	(A,39,89)	CKSSYB103K16
C 305	(B,34,92)	CEVW101M16
C 307	(B,56,90)	CKSSYB104K10
C 601	(B,46,60)	CCSRCH102J50
C 602	(B,41,65)	CCSRCH102J50
C 701	(A,64,46)	CKSSYB104K10
C 703	(B,50,61)	CKSSYB103K16
C 706	(B,50,62)	CKSSYB104K10
C 707	(A,36,45)	CKSSYB104K10
C 712	(A,22,42)	CKSRYB224K16
C 714	(B,60,45)	CKSSYB104K10
C 716	(A,61,40)	CKSSYB103K16
C 722	(B,52,48)	CKSQYB475K6R3
C 723	(A,26,41)	CKSRYB105K10
C 903	(B,56,70)	CKSSYB471K50
C 906	(A,40,77)	CKSRYB224K16
C 907	(A,47,76)	CKSSYB103K16
C 910	(B,60,71)	CKSQYB225K10

Miscellaneous Parts List

	Pickup Unit(P10)(Service)	CXX1641
M 1	Motor Unit(SPINDLE)	CXC4440
M 2	Motor Unit(LOADING/CARRIAGE)	CXB8933

6. ADJUSTMENT

6.1 CD ADJUSTMENT

1) Cautions on adjustments

• In this product the single voltage (3.3V) is used for the regulator. The reference voltage is the REFO1 (1.65V) instead of the GND.
If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:
a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.
b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.
c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

• Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

• For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

• In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

• The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

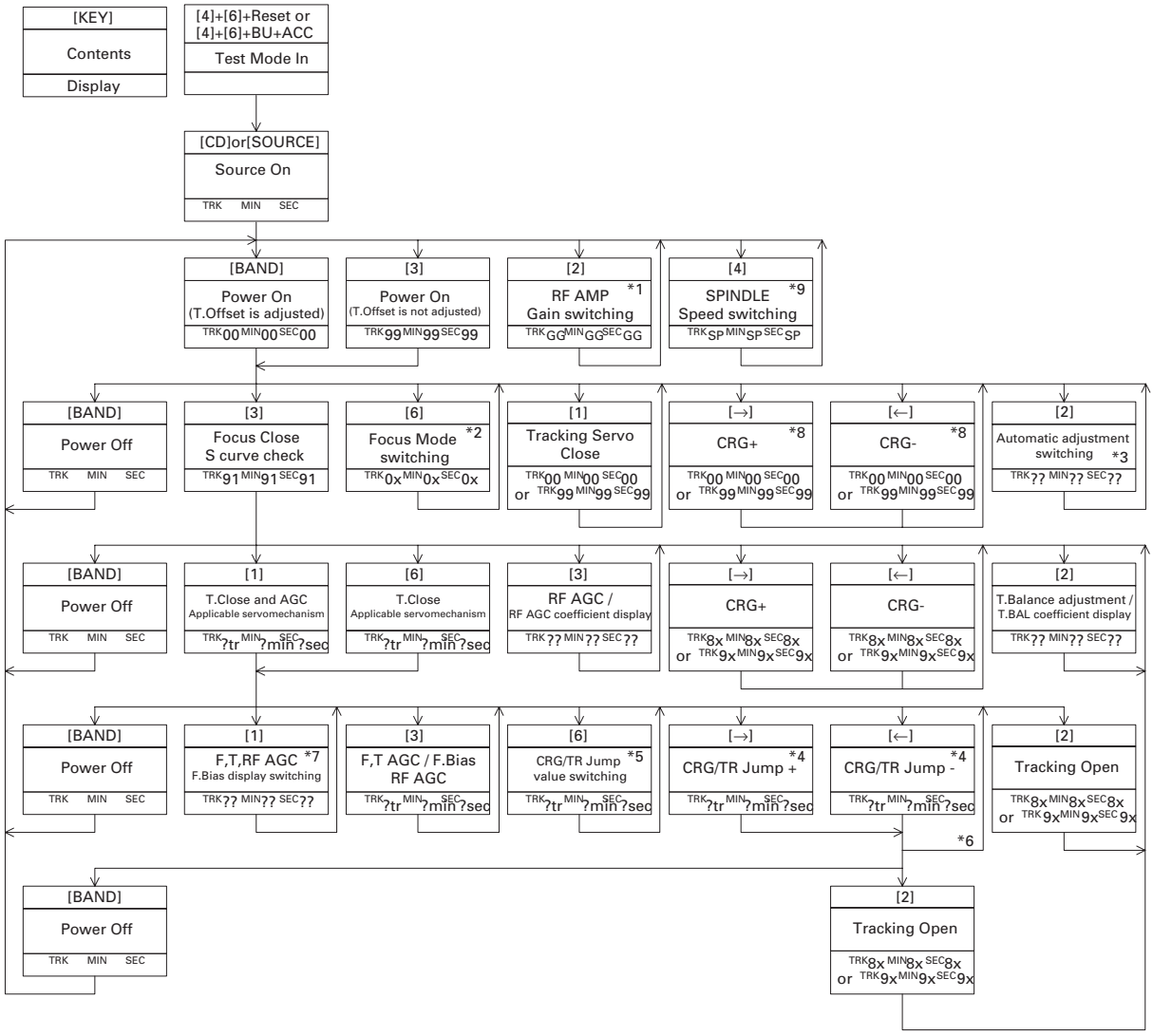
• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode

This mode is used to adjust the CD mechanism module.
• To enter the test mode.
While pressing the 4 and 6 keys at the same time, reset.
• To exit from the test mode.
Turn off the ACC and back up.

Notes:
a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.
b. If you have pressed the (→) key or (←) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.
c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.
d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.
e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0dB, and the auto-adjustment values are reset to the default settings.

● Flow Chart



*1) TYP (TRK MIN SEC) → -6dB (TRK 06 MIN 06 SEC 06) → -12dB (TRK 12 MIN 12 SEC 12)

*2) Focus Close (TRK 00 MIN 00 SEC 00 / TRK 99 MIN 99 SEC 99) → S.Curve check setting (TRK 01 MIN 01 SEC 01) → F EQ measurement setting (TRK 02 MIN 02 SEC 02)

*3) F.Offset Display → T.Offset Display → Switch to the order of the original display

*4) 1TR / 32TR / 100TR

*5) Single TR → 32TR → 100TR → CRG Move
9x(8x) : 91(81) 92(82) 93(83) 94(84)

*6) Only at the time of CRG move, 100TR jump

*7) TRK/MIN/SEC → F.AGC → T.AGC → F Bias → RF AGC

*8) CRG motor voltage = 2[V]

*9) Applicability : A, B, C, D, E, F
TYP(1X) (TRK MIN SEC) → 2X (TRK 22 MIN 22 SEC 22) → 1X (TRK 11 MIN 11 SEC 11)
As for the double speed (2x), audio output cannot be supported

Applicability : G
TYP(2X) (TRK MIN SEC) → 1X (TRK 11 MIN 11 SEC 11) → 2X (TRK 22 MIN 22 SEC 22)

[Key]	Operation Test Mode
[BAND]	Power On / Off
[→]	CRG + / TR Jump + (Direction of the external surface)
[←]	CRG - / TR Jump - (Direction of the internal surface)
[1]	U.CLS and AGC and Applicable servomechanism / AGC, AGC display setting
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T.Open
[3]	Close, S.Curve / Rough Servo and RF AGC / F, T, RF AGC
[4]	SPDL 1X / 2X switching As for the double speed (2x), audio output cannot be supported.
[5]	Error Rate measurement 1st - ON : ERR count Beginning (30Sec) 2nd - ON : BER display data [%]
[6]	F.Mode switching / Tracking Close / CRG • TR Jump switching

6.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

• **Note :**
The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

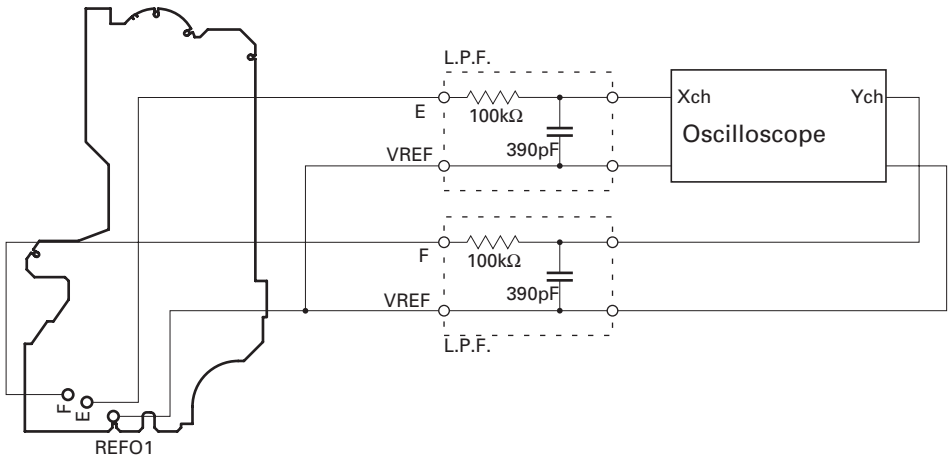
• **Purpose :**
To check that the grating is within an acceptable range when the PU unit is changed.

• **Symptoms of Mal-adjustment :**
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• **Method :**

• Measuring Equipment	• Oscilloscope, Two L.P.F.
• Measuring Points	• E, F, REFO1
• Disc	• TCD-782
• Mode	• TEST MODE

CD CORE UNIT(S10.1)



• **Checking Procedure**

1. In test mode, load the disc and switch the 3V regulator on.
2. Using the → and ← buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

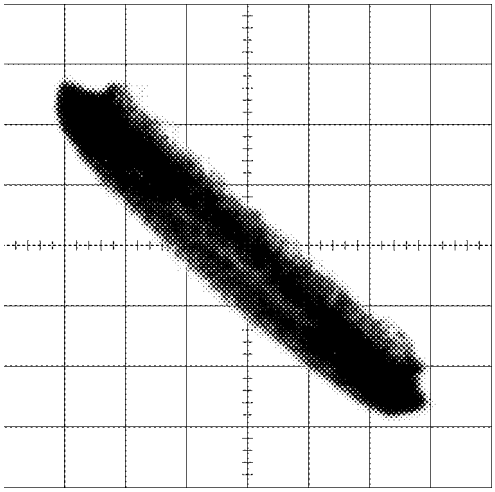
• **Note**
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• **Hint**
Reloading the disc changes the clamp position and may decrease the "wobble".

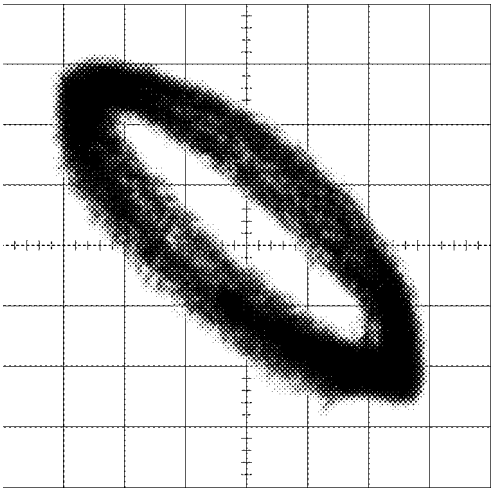
Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

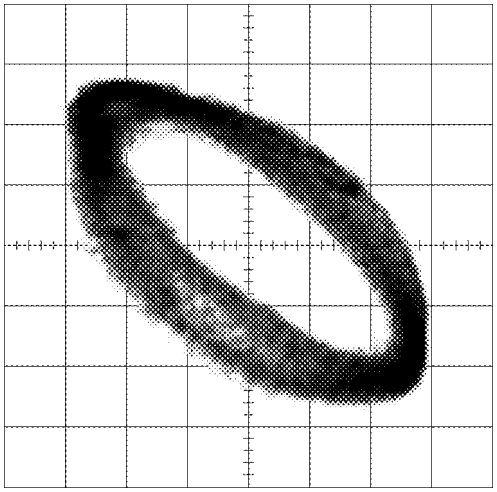
0°



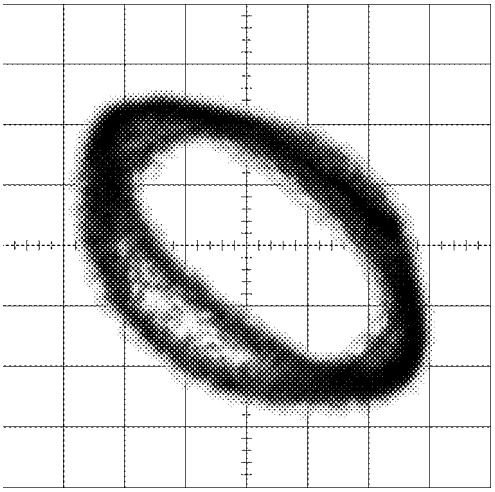
30°



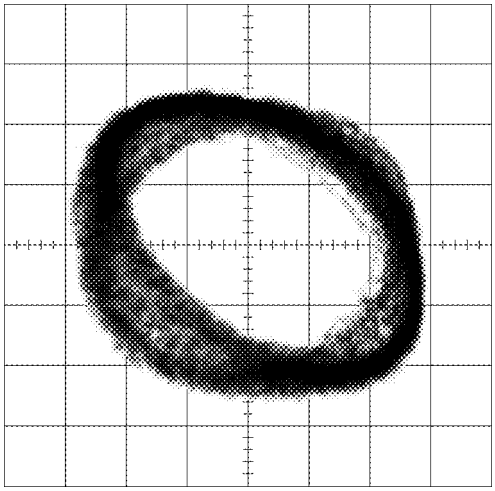
45°



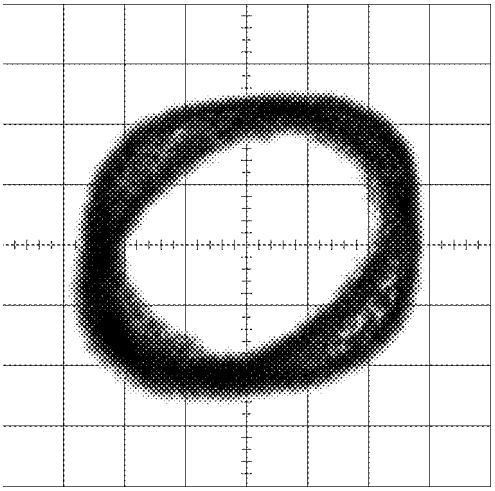
60°



75°



90°



6.3 ERROR MODE

● Error Messages

Error is displayed with number for Error cause when CD is inoperative or stops with Error during operation. The purpose is to reduce nonsense calls from users as well as to assist all related analysis and repair for defects at service station.

(1) Basic Display Method

1) When CSMOD (CD mode area for system) is SERRORM, Error code will be written in DMIN (minutes area for display), DSEC (seconds area for display). The same data shall be written in DMIN and DSEC. DTNO is blank as usual.

2) Display Example of Head Unit

The following is about LCD display ability. xx is Error number.

8 digits	6 digits	4 digits
ERROR–xx	ERR–xx OR Err–xx	E–xx

(2) Error Code List

No.	Classification	Contents	Details • Cause
10	Electricity	Carriage Home NG	CRG can't move to the inner. CRG can't move from the inner. → HOME SW failure, CRG movement failure.
11	Electricity	Focus Search NG	Focus can't be caught. → Back of Disc / Severe dirt and vibration.
12	Electricity	Spindle Lock NG Subcode NG RF-amp NG	Not spindle, lock. Wrong subcode (can't read). → Defective Spindle. Scratch and dirt on Disc. Intense vibration. The appropriate gain of the RF amp cannot be obtained. → Defective spindle. → Scratched or dirty disc. Severe vibration. Abnormal CD signals. → Blanc CD-R disc. Disc inserted upside down.
17	Electricity	Setup NG	AGC protection doesn't work, out of Focus soon. → Scratch on Disc/Severe dirt and vibration.
22	Disc	Impossible to play	There is no playable MP3 or WMA file present in a disc. → No MP3 or WMA file exists in a CD-ROM disc inserted.
23	Disc	File Format NG	Contents are stored in an incompatible file format. → The contents in a CD-ROM disc inserted are recorded in a file format other than ISO9660 Level-1 and 2.
30	Electricity	Search Time Out	Can't reach the target address. → Defective CRG/tracking, or scratch on Disc.
44	Disc	Impossible to play	There is no playable TRK No. present in a disc. → All TRK Nos. In a disc inserted are specified as a track which should be skipped, in the track skip information.
50	Mecha	Disc Load / Eject NG	Disc loading/ejection cannot be complete. → Foreign objects entered into the mechanism. Disc caught in between during loading/ejection.
A0	System	Power NG	Power supply (VD) isn't connected to the ground. → Defective SW transistor. Abnormal power (failed connector)

Note : Error doesn't display in mechanism only. (CD off causes mechanism off)
If TOC can't be read, error wouldn't occur, but mechanism still continues its operation.
The upper digits of error code is mainly classified by 3 kinds as follows:
1x: Setup related error, 3x: Search related error, Ax: Other errors.

6.4 SYSTEM MICROCOMPUTER TEST PROGRAM

● PCL output

In the normal operation mode (with the detachable panel installed, the ACC switched ON, the standby mode cancelled), shift the TESTIN (Pin 86) terminal to H.
The clock signal is output from the PCL terminal (Pin 37).
The frequency of the clock signal is 312.500kHz that is one 32nd of the fundamental frequency.
The clock signal should be 312.500kHz ± 13Hz.
If the clock signal is out of the range, the X'tal (X601) should be replaced with new one.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case (not shown)**

1. Remove the Case.

● **Removing the CD Mechanism Module (Fig.1)**

1 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

● **Removing the Grille Assy (Fig.1)**

2 Remove the two screws and then remove the Grille Assy.

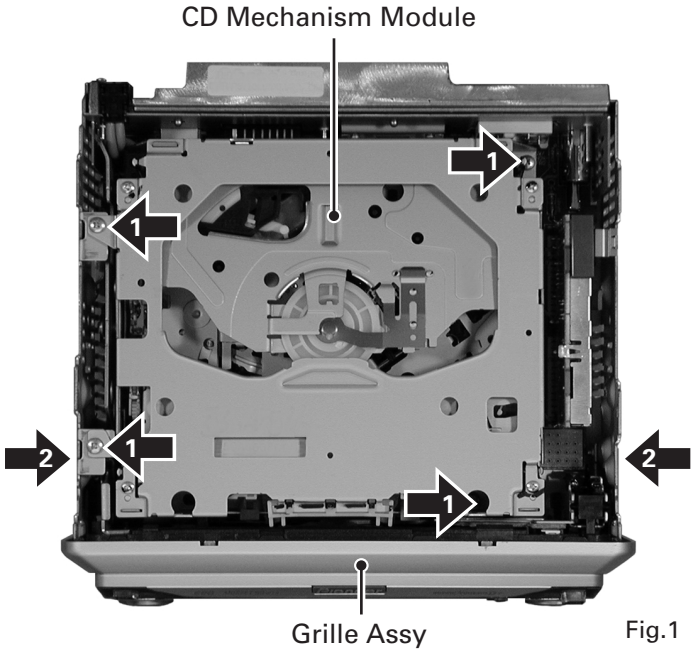


Fig.1

● **Removing the Tuner Amp Assy (Fig.2)**

1 Remove the screw.

2 Remove the three screws.

3 Straighten the tabs at three locations indicated.

4 Remove the screw and then remove the Tuner Amp Assy.

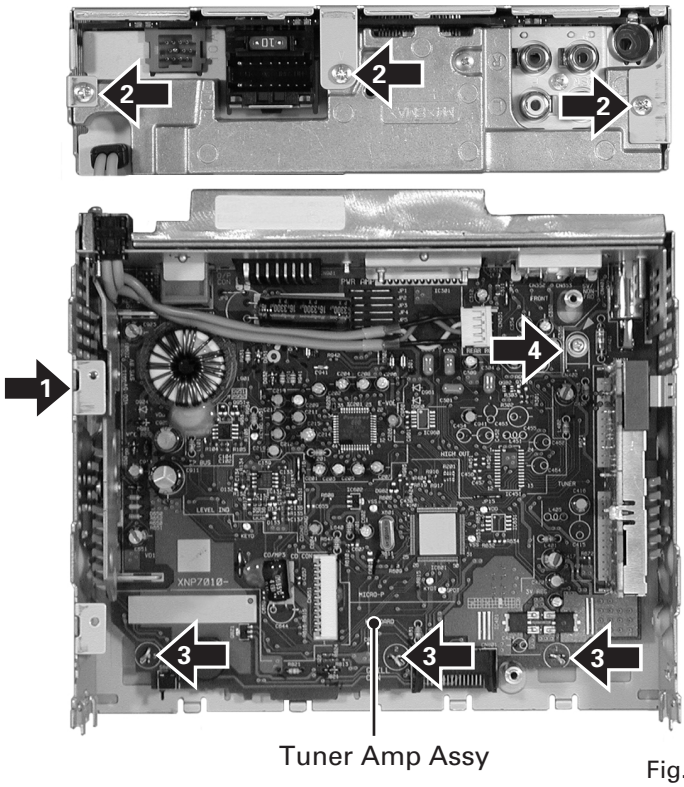
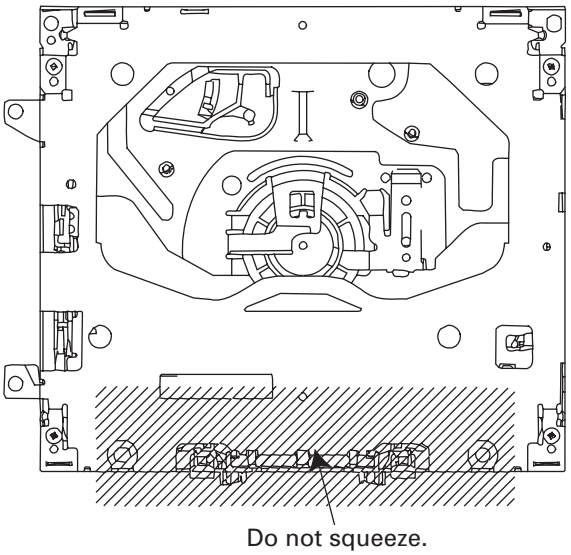


Fig.2

● How to hold the Mechanism Unit

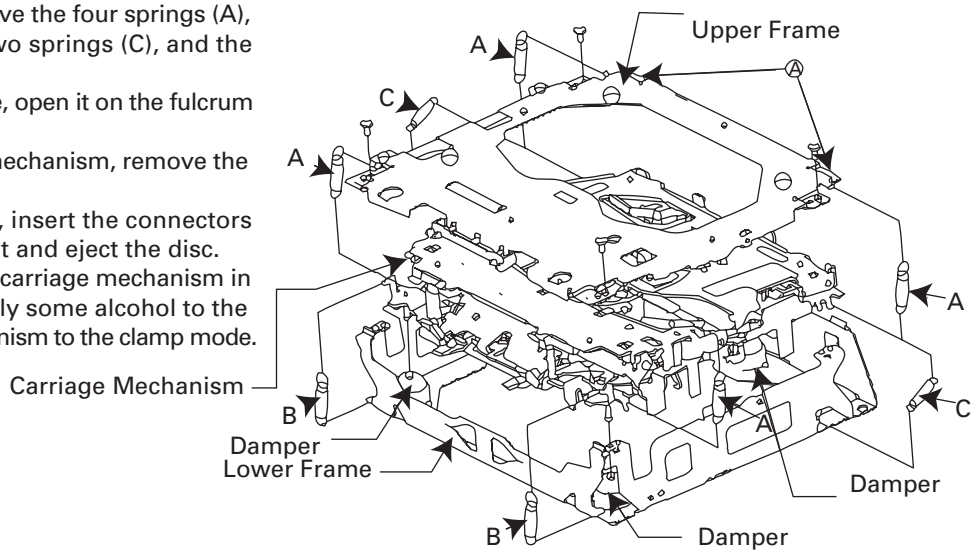
1. Hold the top and bottom frame.
2. Do not squeeze top frame's front portion too tight, because it is fragile.



● Removing the Upper and Lower Frames

1. With a disc clamped, remove the four springs (A), the two springs (B), the two springs (C), and the four screws.
2. To remove the upper frame, open it on the fulcrum A.
3. While lifting the carriage mechanism, remove the three dampers.
4. With the frames removed, insert the connectors coming from the main unit and eject the disc.

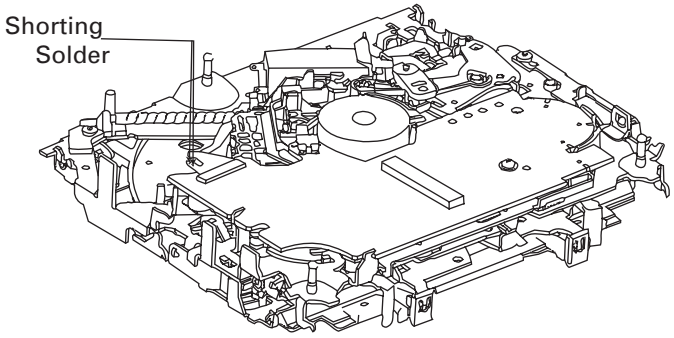
Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.

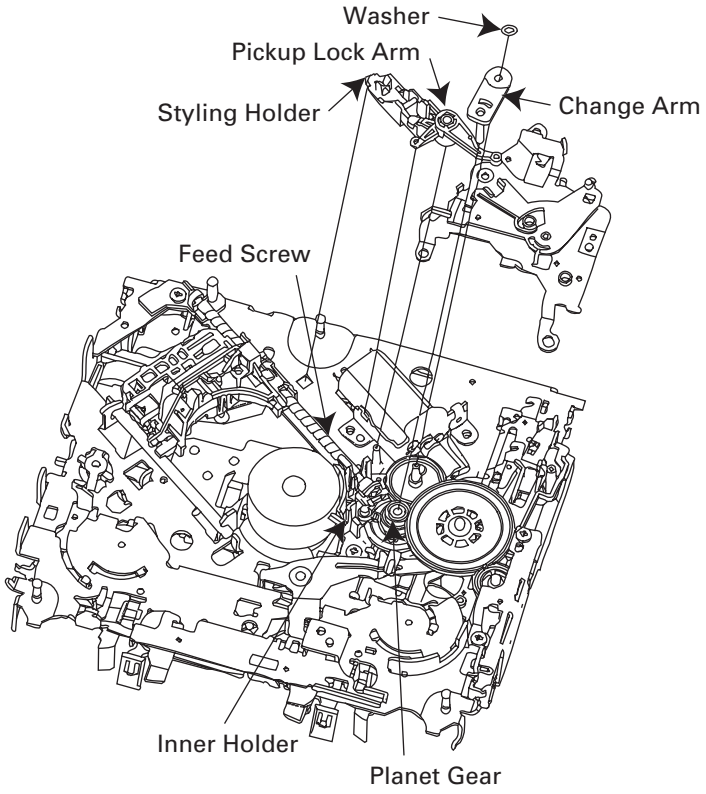


● Removing the Pickup Unit

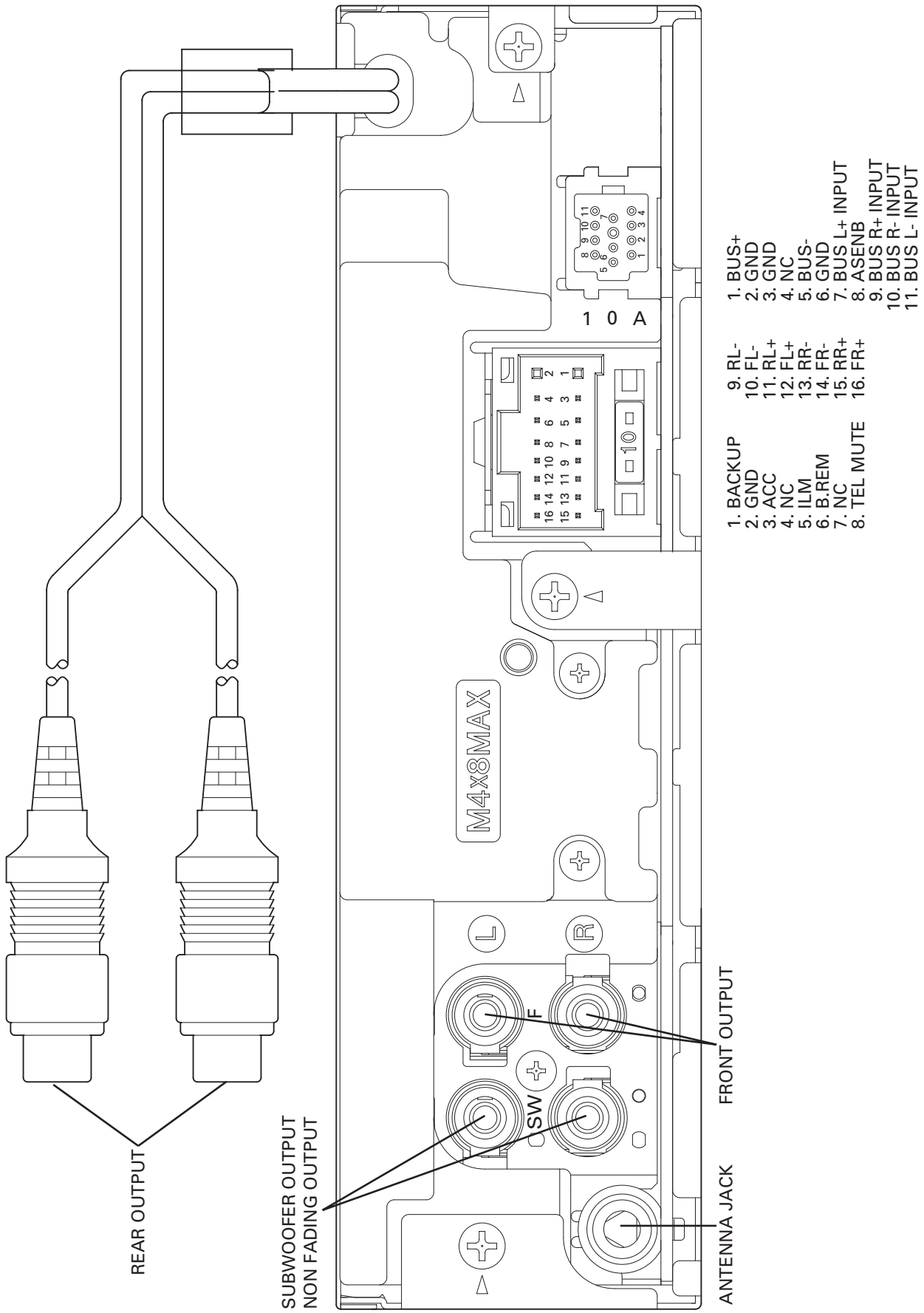
1. Apply shorting solder to the Pickup flexible cable. Disconnect the cable.
2. Set the mechanism to the clamp mode.
3. Remove the lead wires from the inner holder.
4. Remove the washer, styling holder, change arm, and pickup lock arm.
5. While releasing from the hook of the inner holder, lift the end of the feed screw.

Caution: In assembling, move the planet gear to the load/eject position before setting the feed screw in the inner holder.





7.1.2 CONNECTOR FUNCTION DESCRIPTION



7.2 PARTS

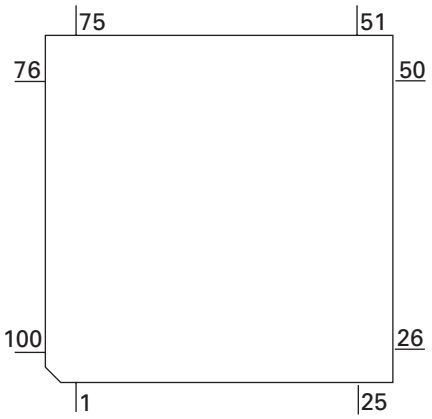
7.2.1 IC

● **Pin Functions(PEG063A)**

Pin No.	Pin Name	I/O	Function and Operation
1	SYSPW	O	System power control output
2	KEYD	I	Wired remote control key input
3-5	NC		Not used
6	BYTE	I	External data bus width change input
7	CNVSS	I	Processor mode change input
8	TELIN	I	TEL : Cellular mute input
9	NC		Not used
10	$\overline{\text{RESET}}$	I	Reset input
11	XOUT	O	Clock output
12	VSS		GND
13	XIN	I	Clock input
14	VCC		Power supply input
15-18	NC		Not used
19	RX2	I	IPBUS : Input 2
20	LCDPW	O	Back light power supply output
21	NC		Not used
22	PEE	O	PEE sound output
23	NC		Not used
24	$\overline{\text{BRST}}$	O	PBUS : Reset output
25	$\overline{\text{BRXEN}}$	I/O	PBUS : Communication input/output
26	$\overline{\text{BSRQ}}$	I	PBUS : Communication demand input
27	RX	I	IPBUS : Input
28	TX	O	IPBUS : Output
29	BSO	O	PBUS : Output
30	BSI	I	PBUS : Input
31	BSCK	O	PBUS : Clock output
32	NC		Not used
33	DPDT	O	GRILL : Data output
34	KYDT	I	GRILL : Data input
35, 36	ROT1, 0	I	Rotary encoder pulse input1, 0
37	PCL	O	Output for clock adjustment
38	SWVDD	O	GRILL : Chip enable output
39	$\overline{\text{DSENS}}$	I	Detach sense input
40	FLPILM	O	Illumination output inside flap
41	ILMPW	O	Illumination output
42	$\overline{\text{EJTIN}}$	I	Eject key input
43-55	NC		Not used
56	CSENSOUT	O	CSENS state output(H : FLAP open)
57	EMUTE	O	EVOL : Mute output
58, 59	NC		Not used
60	VCC	I	Power supply input
61	NC		Not used
62	VSS	I	GND
63-66	NC		Not used
67	DALMON	O	For consumption current reduction
68	NC		Not used
69	$\overline{\text{TUNPCE2}}$	O	TUNER : Chip enable output(EEPROM)
70	TUNPCE1	O	TUNER : Chip enable output(PLL)
71	NC		Not used
72	$\overline{\text{ASENS}}$	I	ACC sense input
73	$\overline{\text{BSENS}}$	I	Back up sense input
74	ROMCK	O	ROM correction : Clock output
75	ROMDATA	I/O	ROM correction : Data input/output
76	VST	O	EVOL : Strobe output
77	VDT	O	EVOL : Data output
78	VCK	O	EVOL : Clock output
79	IPPW	O	IPBUS : Driver power supply control output
80	ASENBO	O	IPBUS : Slave ACC sense output
81	$\overline{\text{ISENS}}$	I	Illumination sense input
82,83	MODEL1,0	I	Model select input

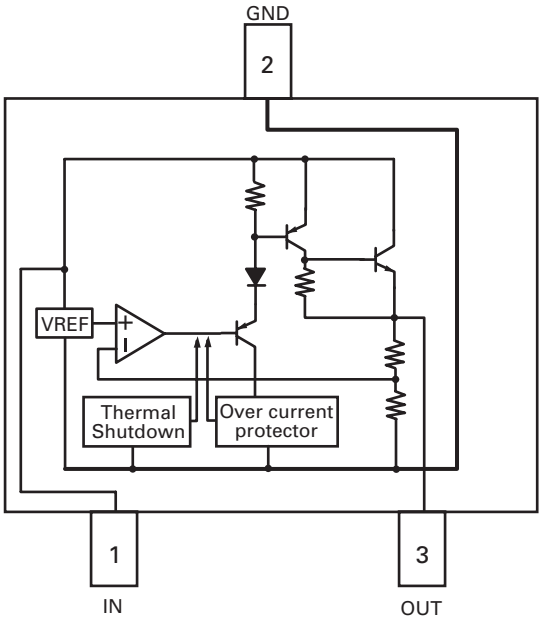
Pin No.	Pin Name	I/O	Format Function and Operation
84	NC		Not used
85	MUTE	O	MUTE output
86	TESTIN	I	Test program input
87,89	NC		Not used
89	KEYAD	I	Wired remote control key input
90	LVLINR	I	Level indicator R.ch input
91	CSENS	I	Flap opening-and-closing sense input
92	LVLINL	I	Level indicator L.ch input
93	NC		Not used
94	AVSS		GND
95	SL	I	TUNER : Signal level input
96	VREF		AD translation reference voltage
97	AVCC		AD translation power supply input terminal
98	TUNPDI	I	TUNER : PLL communication input
99	TUNPDO	O	TUNER : Data output(PLL)
100	TUNPCK	O	TUNER : Clock output(PLL)

* PEG063A



IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

NJM2391DL1-05



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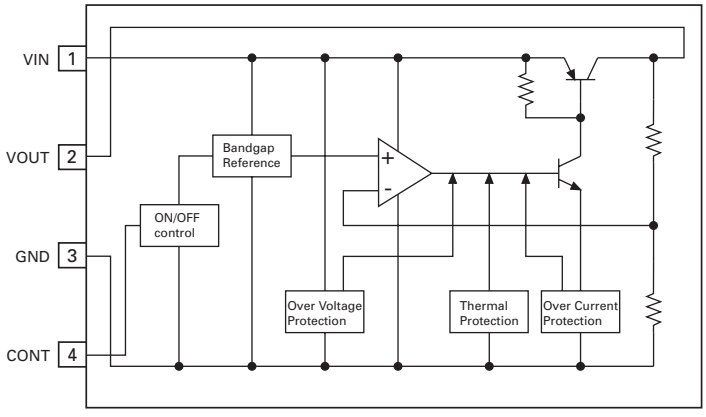
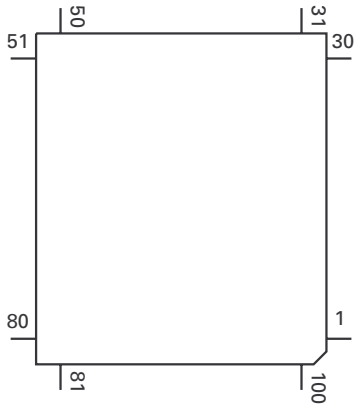


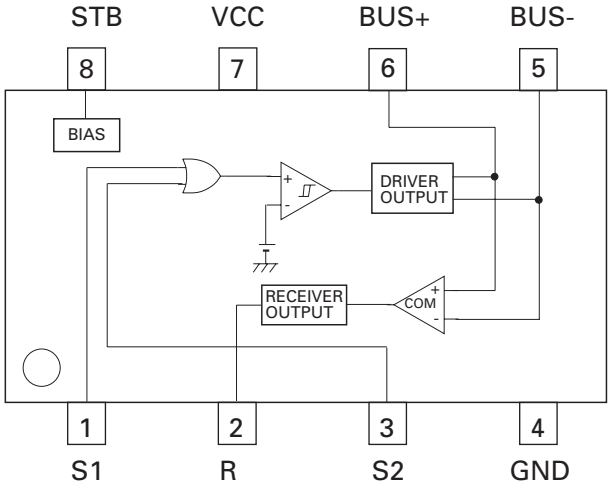
● Pin Functions (PD2072A)

Pin No.	Pin Name	I/O	Function and Operation
1	X0		Crystal oscillator connection pin
2	$\overline{\text{TEST}}$	I	Test input
3	VDD		Power supply
4	$\overline{\text{ADJ}}$	O	LCD brightness adjustment output
5	DIM	O	Dimmer output
6	RESET	I	Reset input
7,8	NC		Not used
9	REM	I	Remote control reception input
10,11	NC		Not used
12–15	$\overline{\text{KDT0}}$-$\overline{\text{3}}$	I	Key data input
16,17	NC		Not used
18	SO	O	System micro computer UART communication data output
19	SI	I	System micro computer UART communication data input
20	NC		Not used
21–75	SEG55-1	O	LCD segment output
76–84	COM0-7	O	LCD common output
85–90	KST1-6	O	Key strobe output
91,92	NC		Not used
93-96	V4-1		LCD drive power supply
97,98	C1,C0		Not used
99	VSS		GND
100	X1		Crystal oscillator connection pin

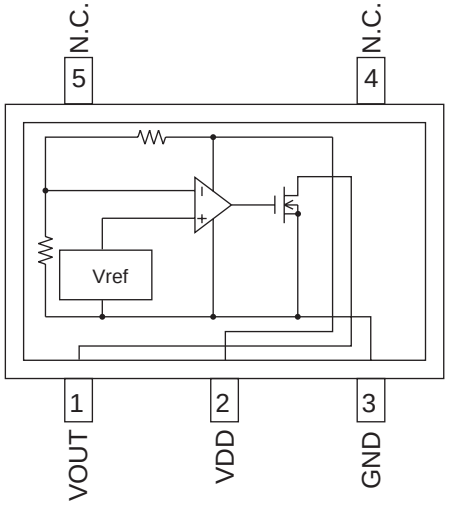
* PD2072A



HA12240FP



BD4834G

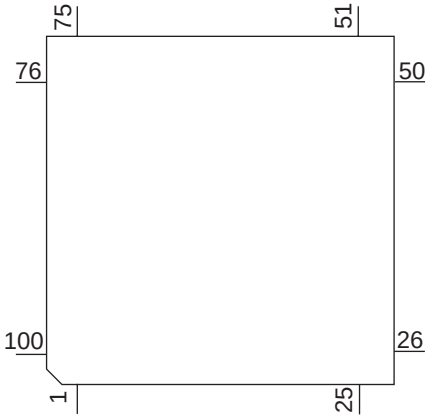


● Pin Functions(PE5454A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	AVREF			A power supply Positive power supply(5V)
2	AVSS			A power supply GND
3	RFOK	O	C	Output of state of RFOK
4	NC			Not used
5	EVDD			E power supply Positive power supply
6, 7	NC			Not used
8	IC/FLMD0			IC : VSS direct connection/FLMOD0 : Pull-down
9	VDD			Positive power supply(5V)
10	REGC			Connected to the capacity stabilizing output of the regulator
11	VSS			GND
12	X1	I		Oscillator connection for mainclock
13	X2			Oscillator connection for mainclock
14	$\overline{\text{RESET}}$	I		System reset input
15	XT1	I		Connected to the oscillator for subclock (connected to VSS via the resistor)
16	XT2			Connected to the oscillator for subclock(Open)
17	NC			Connected to EVDD or EVSS via the resistor
18	NC			Not used
19	$\overline{\text{XINT}}$	I	C	CD LSI interruption signal input
20	NC			Connected to VSS via the resistor
21	$\overline{\text{BRST}}$	I		P-Bus reset input
22	BSI	I		P-Bus serial data input
23	BSO	O	C	P-Bus serial data output
24	$\overline{\text{BSCK}}$	I/O	/C	P-Bus serial clock input/output
25	FTXD	O	C	For flash rewriting(transmitted signal)
26	FRXD	I		For flash rewriting(received signal)
27	BRXEN	I/O	/C	It is possible to receive P-Bus
28	$\overline{\text{BSRQ}}$	I/O	/C	P-Bus service request demand
29	NC			Not used
30	DSCSNS	I		Disc state sense input
31	8EJ(S905)	I		Input of detection of 8 cm disc ejection
32	12EJ(S904)	I		Input of detection of 12 cm disc ejection
33	EVSS			E power supply GND
34	EVDD			E power supply Positive power supply
35, 36	SRAMLEVEL0, 1	O	C	SRAM level meter output
37	EMPH	O	C	Emphasis information output
38	$\overline{\text{EMPH}}$	O	C	Emphasis information output
39-42	NC			Not used
43	$\overline{\text{ADENA}}$	O	C	A/D reference voltage supply control output
44	LRCKOK	O	C	(DOUT mute output)
45	SRAMLEVEL2	O	C	SRAM level meter output
46	CD3VON	O	C	CD +3.3V power supply control output
47	CONT	O	C	Servo driver power supply control output
48	$\overline{\text{XRST}}$	O	C	CD LSI reset control output
49	VDCONT	O	C	VD power supply control output
50	ROMDATA	I/O	/C	E2PROM data input/output
51	ROMCS	O	C	E2PROM chip selection output
52	ROMCK	O	C	E2PROM clock output
53	LOEJ	O	C	The direction change output of LOAD/EJECT
54	CLCONT	O	C	Driver input change output
55	CDMUTE	O	C	CD mute control output
56-58	NC			Not used
59	$\overline{\text{XCS}}$	O	C	CD LSI chip selection output
60	NC			Not used
61	$\overline{\text{XWAIT}}$	I		CD LSI write control signal output
62	CLKOUT	O	C	Internal system clock output(Open)
63	LOCK	I		Spindle lock input
64	NC			Not used
65	$\overline{\text{XWRITE}}$	O		CD LSI write control signal output
66	NC			Not used

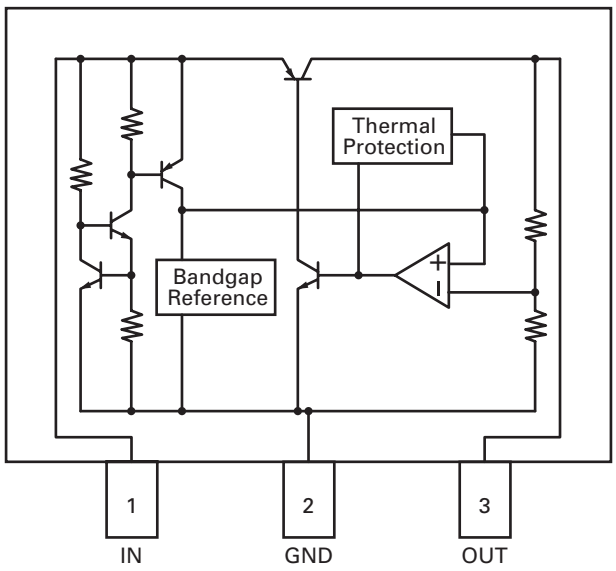
Pin No.	Pin Name	I/O	Format	Function and Operation
67	$\overline{\text{XREAD}}$	O		CD LSI read control signal output
68	XASTB	O		CD LSI address strobe output
69	BVSS			B power supply GND
70	BVDD			B power supply Positive power supply
71-83	AD0-12	I/O	/C	Address/data Bus 0-12 input/output
84-86	NC			Not used
87	FMODE	I		For flash rewriting Connected to VSS via the resistor
88	FLRQ	O	C	For flash rewriting output
89-93	NC			Not used
94	$\overline{\text{CSENS}}$	I		Flap closing sense input
95	TYPE_A/D	I		CD-DA analog/digital output change setup input
96	$\overline{\text{TESTIN}}$	I		Chip check test program starting input
97	HOME	I		Home SW sense input
98	TEMP	I		Temperature information sense input
99	VDSENS	I		VD power supply short sense input
100	NC			Not used

* PE5454A



Format	Meaning
C	CMOS

NJM2885DL1-33

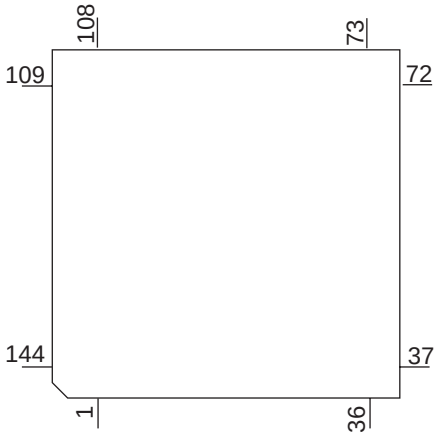


● Pin Functions(UPD63763GJ)

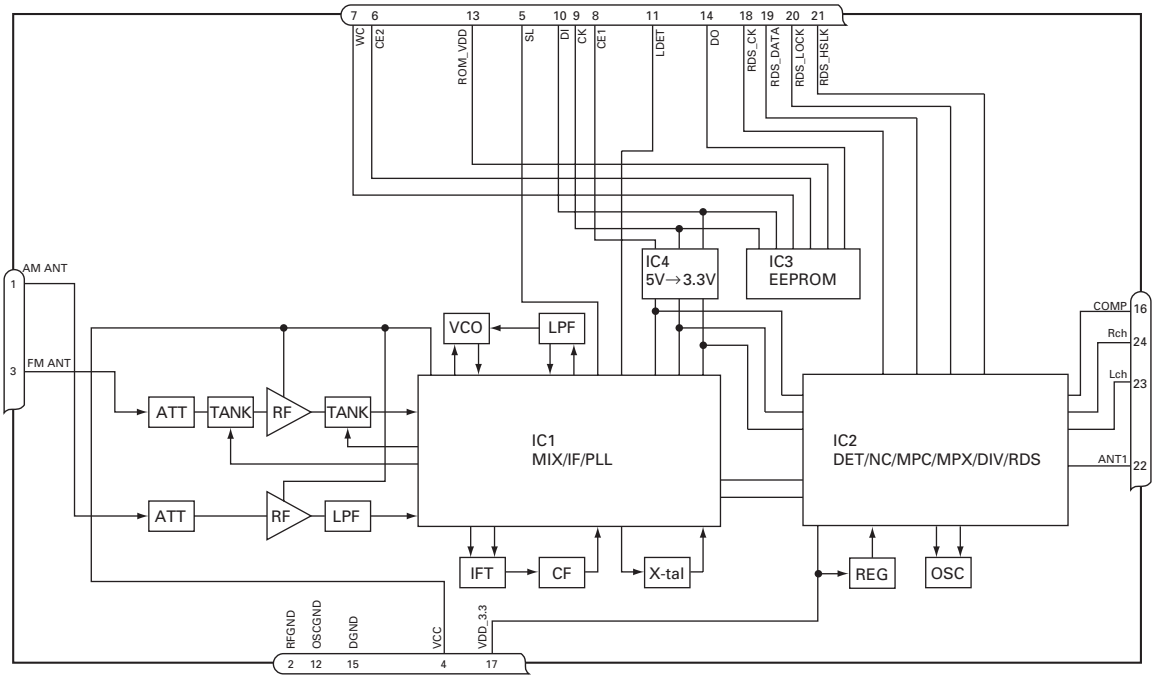
Pin No.	Pin Name	I/O	Function and Operation
1	D.VDD		Power supply for digital circuits
2	D1.GND		GND for 1.6V digital circuits
3	$\overline{\text{RESET}}$	I	Input of reset
4-8	AB12-8	I	Address bus 12-8 from the microcomputer
9-16	AD7-0	I/O	Address/data bus 7-0 to the microcomputer
17	$\overline{\text{CS}}$	I	Chip selection
18	ASTB	I	Address strobe
19	$\overline{\text{READ}}$	I	Control signals(read)
20	$\overline{\text{WRITE}}$	I	Control signals(write)
21	$\overline{\text{WAIT}}$	O	Control signals(wait)
22	INTQ	O	Interruption signals to the external microcomputer
23, 24	IFMODE0, 1	I	Switching the microcomputer I/F 0, 1
25	D1.VDD		Power supply for 1.6V digital circuits
26	DA.VDD		Power supply for DAC
27	ROUT	O	Output of audio for the right channel
28	DA.GND		GND for DAC
29	REGC		Connected to the capacitor for band gap
30	DA.GND		GND for DAC
31	LOUT	O	Output of audio for the left channel
32	DA.VDD		Power supply for DAC
33	X.VDD		Power supply for the crystal oscillator
34	XTAL	I	Connected to the crystal oscillator(16.9344MHz)
35	$\overline{\text{XTAL}}$	O	Connected to the crystal oscillator(16.9344MHz)
36	X.GND		Ground for the crystal oscillator
37	VDDREG15		Control of 1.6V regulator
38	PWMSW0	I	Setup 0 for PWM output(SD, MD)
39-41	TEST3-1	I	Connected to GND
42	PWMSW1	I	Setup 1 for PWM output(FD, TD)
43	TESTEN	I	Connected to GND
44	D1.GND		GND for 1.6V digital circuits
45	DIN	I	Input of audio data
46	DOUT	O	Output of audio data
47	SCKIN	I	Clock input for audio data
48	SCKO	O	Clock output for audio data
49	LRCKIN	I	Input of LRCK for audio data
50	LRCK	O	Output LRCK for audio data
51	$\overline{\text{XTALEN}}$	I	Permission to oscillate 16.9344MHz
52	D1.VDD		Power supply for 1.6V digital circuits
53	RFCK/HOLD	O	Output of RFCK/HOLD signal
54	WFCK/MIRR	O	Output of WFCK/MIRR signal
55	PLCK/RFOK	O	Output of PLCK/Output of RFOK
56	LOCK/RFOK	O	Output of LRCK/Output of RFOK
57	C1D1/C8M	O	Information on error correction/C8M : 8MHz
58	C1D2/C16M	O	Information on error correction/C16M : 16MHz
59	C2D1/RMUTE	O	Information on error correction/Mute for Rch
60	C2D2/LMUTE	O	Information on error correction/Mute for Lch
61	C2D3/SHOCK	O	Information on error correction/Detection of vibration
62	D1.GND		GND for 1.6V digital circuits
63	C33M	O	Output of 33.8688MHz(CLK for SDRAM)
64	($\overline{\text{RCS}}$)	O	DRAM $\overline{\text{CS}}$
65	RA11	O	Output of DRAM address 11
66	(CKE)	O	Output of DRAM CKE
67	$\overline{\text{RAS}}$	O	Output of DRAM $\overline{\text{RAS}}$
68	$\overline{\text{CAS0}}$(LDQM)	O	Output of DRAM lower $\overline{\text{CAS}}$(LDQM)
69	$\overline{\text{CAS1}}$(UDQM)	O	Output of DRAM upper $\overline{\text{CAS}}$(UDQM)
70	$\overline{\text{WE}}$	O	Output of DRAM $\overline{\text{WE}}$
71	$\overline{\text{OE}}$($\overline{\text{CAS}}$)	O	Output of DRAM $\overline{\text{OE}}$($\overline{\text{CAS}}$)
72	D.GND		Ground for digital circuits
73-88	RDB0-15	I/O	Input/output of DRAM data0-15
89-99	RA0-10	O	Output of DRAM address0-10

Pin No.	Pin Name	I/O	Function and Operation
100	D.VDD		Power supply for digital circuits
101	FD+	O	Output of focus drive PWM +
102	FD-	O	Output of focus drive PWM -
103	TD+	O	Output of tracking drive PWM +
104	TD-	O	Output of tracking drive PWM -
105	SD+	O	Output of thread drive PWM +
106	SD-	O	Output of thread drive PWM -
107	MD+	O	Output of spindle drive PWM +
108	MD-	O	Output of spindle drive PWM -
109	REFOUTSV	O	REFOUT for servo
110	AD.VDD		Power supply for ADC
111	EFM	O	Output of EFM signals
112	ASY	I	Input of asymmetry
113	ATEST	O	Analog tests
114	RFI	I	Input of RF
115	AD.GND		Ground for the analog system
116	AGCO	O	Output of RF
117	C3T	O	Connection to the capacitor for detecting 3T
118	AGCI	I	Input of AGC
119	RFO	O	Output of RF(AGC)
120, 121	EQ2, 1	I	Equalizer 2, 1
122	RF2-	I	Reversal input of RF2
123	RF-	I	Reversal input of RF
124	A.GND		Ground for the analog system
125	A	I	Input of A
126	C	I	Input of C
127	B	I	Input of B
128	D	I	Input of D
129	F	I	Input of F
130	E	I	Input of E
131	VREFIN	I	Input of reference voltage
132	A.VDD		Power supply for the analog system
133	REFOUT	O	Output of reference voltage
134	REFC	I	Connected to the capacitor for output of REFOUT
135	FE-	I	Reversal input of FE
136	FEO	O	Output of FE
137	ADIN	I	Input of FE, TE A/D converter
138	TE-	I	Reversal input of TE
139	TEO	O	Output of TE
140	TE2	O	TE2
141	TEC	I	TEC
142	LD	O	Output of LD
143	PD	I	Input of PD
144	D.GND		Ground for digital circuits

* UPD63763GJ



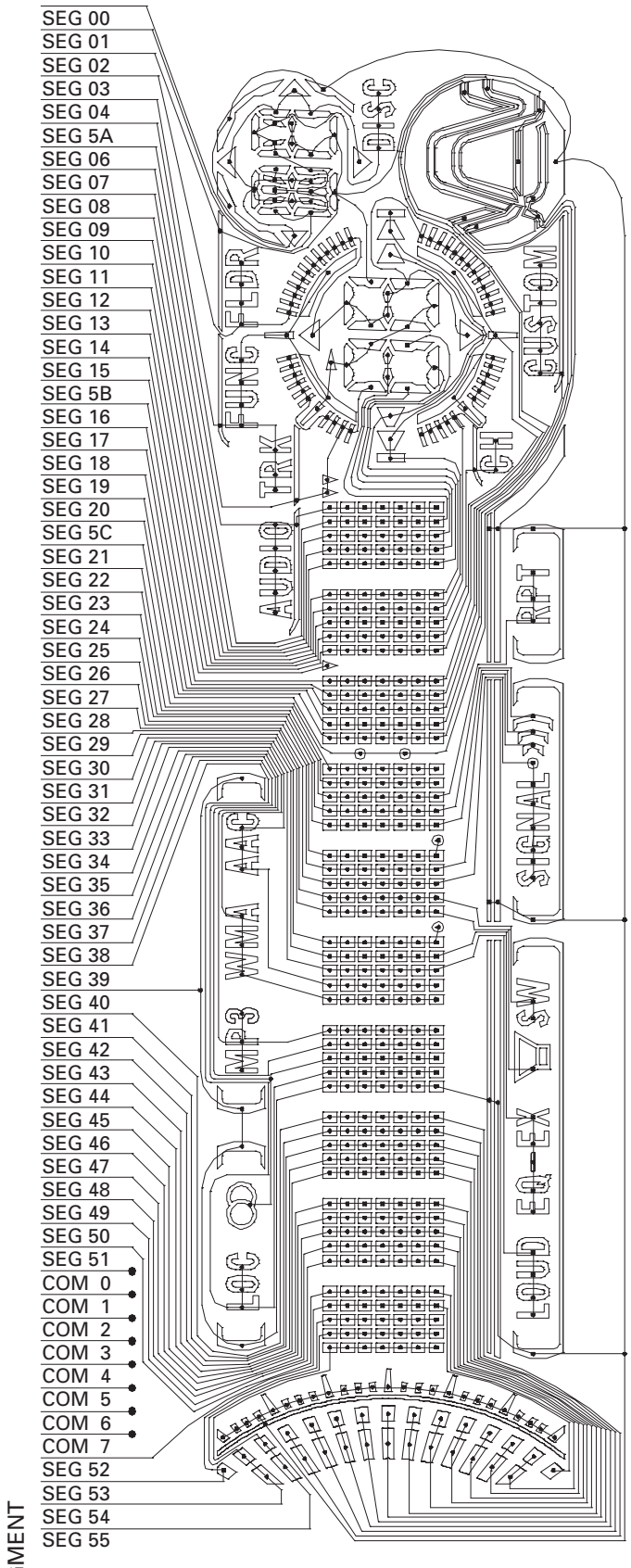
● FM/AM Tuner Unit



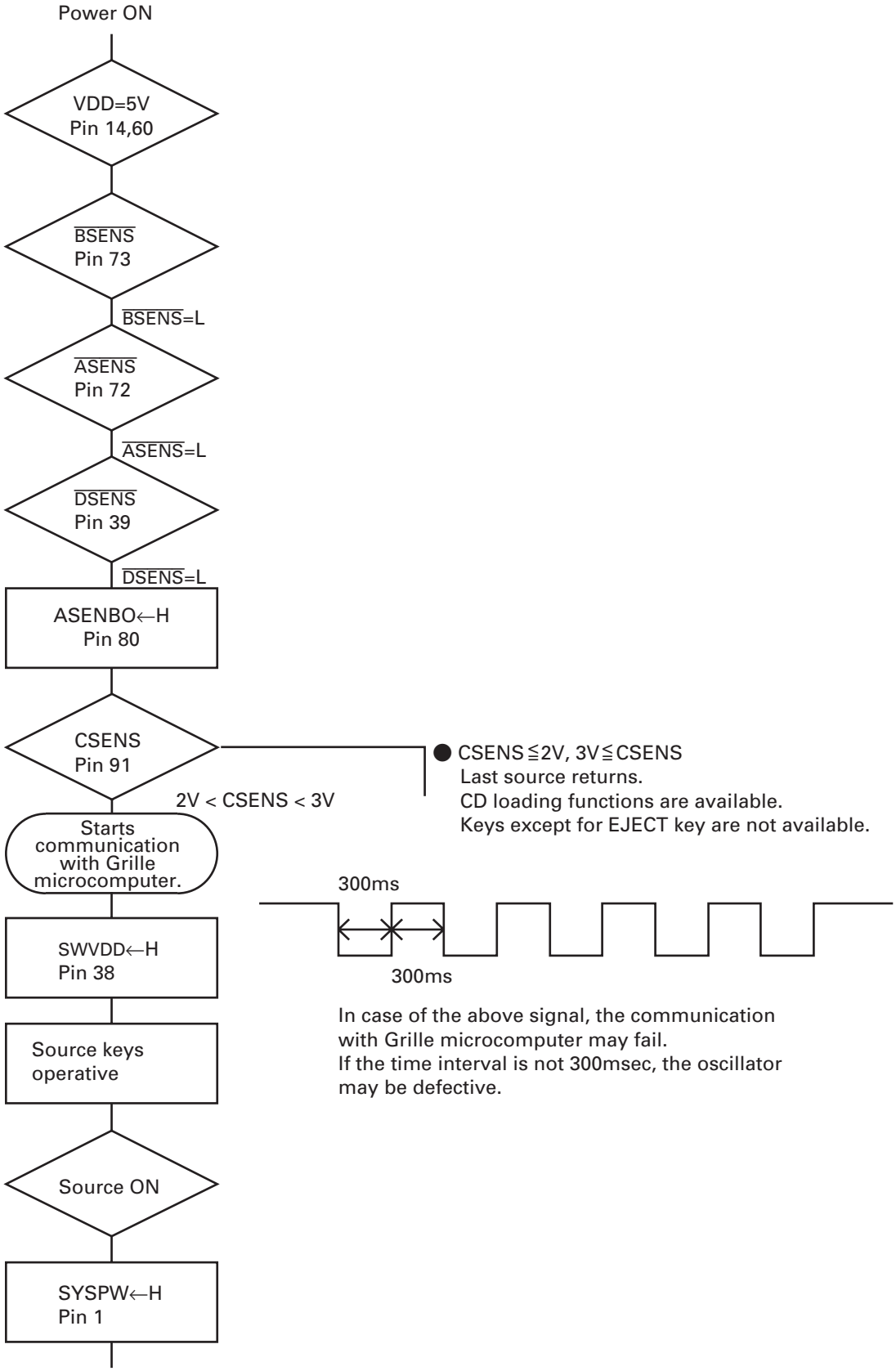
No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 33μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75Ω Surge absorber is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4V ± 0.3V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM "Low" active
7	WC	I	write control	You can write EEPROM, when EEPROM write control is "Low". Ordinary non connection
8	CE1	I	chip enable-1	Chip enable for AF•RF "High" active
9	CK	I	clock	Clock data input
10	DI	I	data in	Data input
11	LDET	O	lock detector	"Low" active
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	COMP	O	composite output	FM composite signal output.
17	VDD_3.3		power supply	The power supply for digital block. 3.3V ± 02V
18	RDS_CK	O	RDS clock	Output of RDS clock(2.5V)
19	RDS_DATA	O	RDS data	Output of RDS data(2.5V)
20	RDS_LOCK	O	RDS lock	Output unit "High" active(2.5V) (RDS_LOCK turns over by the external transistor. "Low" active)
21	RDS_HSLK	O	RDS high speed lock	Output unit "High" active(2.5V)(RDS_HSLK turns over by the external transistor. "Low" active)
22	ANT1		diversity antenna control	Antenna switch control signal output. "High" : MAIN, "Low"=SUB
23	L ch	O	L channel output	FM stereo "L-ch" signal output or AM audio output
24	R ch	O	R channel output	FM stereo "R-ch" signal output or AM audio output

7.2.2 DISPLAY

● **LCD(XAW7013)**



7.3 OPERATIONAL FLOW CHART

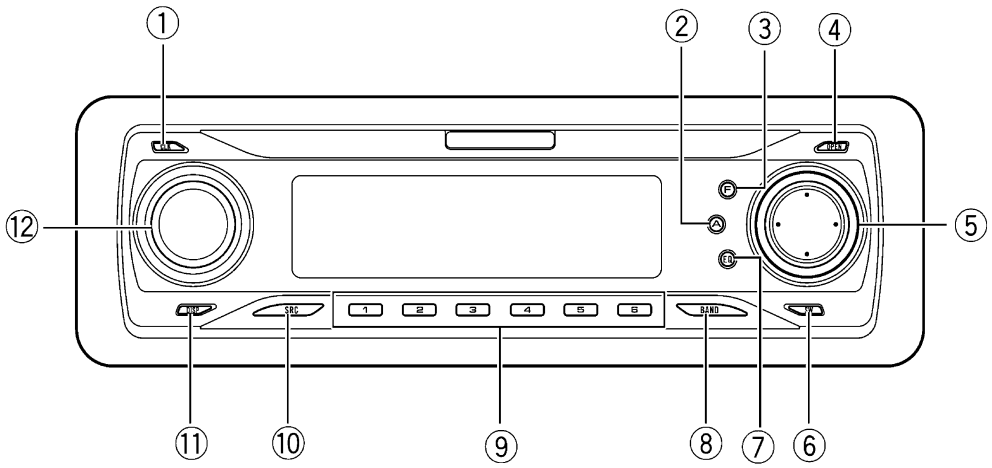


7.4 CLEANING

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

8. OPERATIONS



Head unit

① **CLOCK button**
Press to change to the clock display.

② **AUDIO button**
Press to select various sound quality controls.

③ **FUNCTION button**
Press to select functions.

④ **OPEN button**
Press to open the front panel.

⑤ **▲/▼/◄/► buttons**
Press to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.

⑥ **SW button**
Press to directly select subwoofer setting menu.

⑦ **EQ button**
Press to select various equalizer curves.

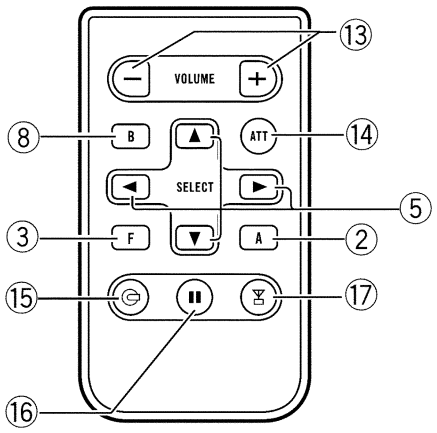
⑧ **BAND button**
Press to select among three FM bands and one AM band and to cancel the control mode of functions.

⑨ **1–6 buttons**
Press for preset tuning and disc number search when using a multi-CD or multi-DVD player.

⑩ **SOURCE button**
This unit is turned on by selecting a source. Press to cycle through all the available sources.

⑪ **DISPLAY button**
Press to select different displays.

⑫ **VOLUME**
When you press **VOLUME**, it extends outward so that it becomes easier to turn. To retract **VOLUME**, press it again.



⑬ **VOLUME button**
Press to increase or decrease the volume.

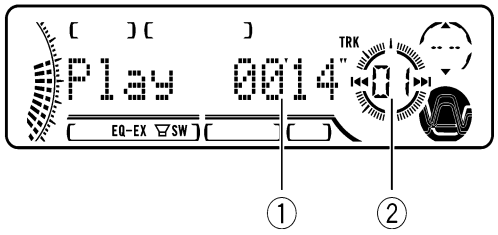
⑭ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

⑮ **CD button**
Press to select the built-in, multi-CD or DVD player as the source.

⑯ **PAUSE button**
Press to turn pause on or off.

⑰ **TUNER button**
Press to select the tuner or TV as the source.

Playing a CD



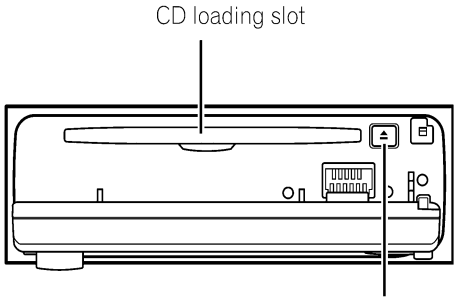
These are the basic steps necessary to play a CD with your built-in CD player. More advanced CD operation is explained starting on the next page.

① **Play time indicator**
Shows the elapsed playing time of the current track.

② **Track number indicator**
Shows the track currently playing.

1 Press OPEN to open the front panel.
CD loading slot appears.
- After a CD has been inserted, press **SOURCE** to select the built-in CD player.

2 Insert a CD into the CD loading slot.
Playback will automatically start.



- You can eject a CD by pressing **EJECT**.
- To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

3 Close the front panel.

4 Use VOLUME to adjust the sound level.
Rotate it to increase or decrease the volume.

5 To perform fast forward or reverse, press and hold ◄ or ►.
- If you select **Rough**, pressing and holding ◄ or ► enables you to search every 10 tracks in the current disc.

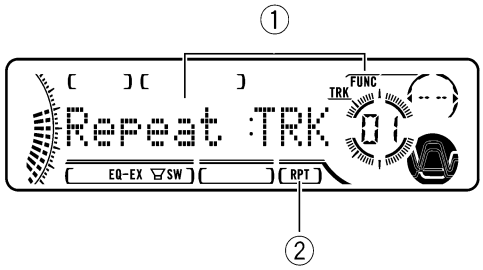
6 To skip back or forward to another track, press ◄ or ►.
Pressing ► skips to the start of the next track. Pressing ◄ once skips to the start of the current track. Pressing again will skip to the previous track.

Notes

- The built-in CD player plays one, standard, 12-cm or 8-cm (single) CD at a time. Do not use an adapter when playing 8-cm CDs.
- Do not insert anything other than a CD into the CD loading slot.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting it again.
- ▲ and ▼ can be operated when MP3, WMA or WAV is playing.
- If an error message such as **ERROR-11** is displayed.

- When a CD TEXT disc is inserted, the disc and track titles begin to scroll to the left automatically.
- When Ever Scroll is set to ON at the initial setting, CD text information scrolls continuously in the display. If you want to display the first 10 characters of text information temporarily and scroll from the beginning, press and hold **DISPLAY**. About Ever Scroll, ▣

Introduction of advanced built-in CD player operation



① **Function display**
Shows the function status.

② **RPT indicator**
Shows when repeat play is turned on.

● **Press FUNCTION to display the function names.**
Press **FUNCTION** repeatedly to switch between the following functions:
Repeat (repeat play)—**Random** (random play)—**Scan** (scan play)—**Pause** (pause)—**COMP** (compression and BMX)—**FF/REV** (search method)
▪ To return to the playback display, press **BAND**.

Note
If you do not operate the function within about 30 seconds, the display is automatically returned to the playback display.▣

Repeating play

Repeat play lets you hear the same track or disc over again.

1 Press FUNCTION to select Repeat.
Press **FUNCTION** until **Repeat** appears in the display.

2 Press ◄ or ► to select the repeat range.
This switches you to the selected setting.
- **Repeat:DSC** – Repeat the current disc
- **Repeat:TRK** – Repeat just the current track

Note
If you perform track search or fast forward/reverse during **Repeat :TRK**, the repeat play range changes to **Repeat :DSC**.▣

Playing tracks in a random order

Random play lets you play back tracks on the CD in a random order.

1 Press FUNCTION to select Random.
Press **FUNCTION** until **Random** appears in the display.

2 Press ▲ to turn random play on.
Random :ON appears in the display. Tracks will play in a random order.

3 Press ▼ to turn random play off.
Random :OFF appears in the display. Tracks will continue to play in order.▣

Scanning tracks of a CD

Scan play lets you hear the first 10 seconds of each track on the CD.

1 Press FUNCTION to select Scan.
Press **FUNCTION** until **Scan** appears in the display.

2 Press ▲ to turn scan play on.
Scan :ON appears in the display. The first 10 seconds of each track is played.

3 When you find the desired track press ▼ to turn scan play off.

Scan :OFF appears in the display. The track will continue to play.

- If the display has automatically returned to the playback display, select **Scan** again by pressing **FUNCTION**.

Note

After scanning of a CD is finished, normal playback of the tracks will begin again.

Pausing CD playback

Pause lets you temporarily stop playback of the CD.

1 Press FUNCTION to select Pause.

Press **FUNCTION** until **Pause** appears in the display.

2 Press ▲ to turn pause on.

Pause :ON appears in the display. Play of the current track pauses.

3 Press ▼ to turn pause off.

Pause :OFF appears in the display. Play will resume at the same point that you turned pause on.

Using compression and BMX

Using the COMP (compression) and BMX functions let you adjust the sound playback quality of this player. Each of the functions have a two-step adjustment. The COMP function balances the output of louder and softer sounds at higher volumes. BMX controls sound reverberations to give playback a fuller sound. Listen to each of the effects as you select through them and use the one that best enhances the playback of the track or CD that you are listening to.

1 Press FUNCTION to select COMP.

Press **FUNCTION** until **COMP** appears in the display.

2 Press ▲ or ▼ to select your favorite setting.

Press ▲ or ▼ repeatedly to switch between the following settings:

COMP OFF—COMP 1—COMP 2—COMP OFF—BMX 1—BMX 2

Selecting the search method

You can switch the search method between fast forward/reverse and searching every 10 tracks.

1 Press FUNCTION to select FF/REV.

Press **FUNCTION** until **FF/REV** appears in the display.

- If the search method **Rough** has been previously selected, **Rough** will be displayed.

2 Press ◄ or ► to select the search method.

Press ◄ or ► until the desired search method appears in the display.

- **FF/REV** – Fast forward and reverse
- **Rough** – Searching every 10 tracks

Searching every 10 tracks in the current disc

If a disc contains over 10 tracks, you can search every 10 tracks. When a disc contains a lot of tracks, you can roughly search for the track you want to play.

1 Select the search method Rough.

2 Press and hold ◄ or ► to search every 10 tracks on a disc.

- If a disc contains less than 10 tracks, pressing and holding ► recalls the last track of the disc. Also, if the remaining number of tracks after searching every 10 tracks is less than 10, pressing and holding ► recalls the last track of the disc.
- If a disc contains less than 10 tracks, pressing and holding ◄ recalls the first track of the disc. Also, if the remaining number of tracks after searching every 10 tracks is less than 10, pressing and holding ◄ recalls the first track of the disc.

Using disc title functions

You can input CD titles and display the title. The next time you insert a CD for which you have entered a title, the title of that CD will be displayed.

Entering disc titles

Use the disc title input feature to store up to 48 CD titles in the unit. Each title can be up to 10 characters long.

1 Play the CD that you want to enter a title for.

2 Press FUNCTION and hold until Title In appears in the display.

- When playing a CD TEXT disc, you cannot switch to **Title In**. The disc title will have already been recorded on a CD TEXT disc.

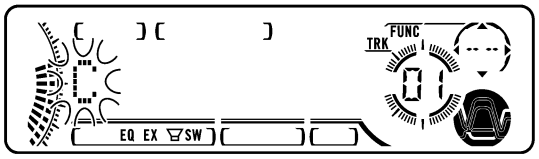
3 Press button 1 to select the desired character type.

Press button **1** repeatedly to switch between the following character types:
Alphabet (upper case), numbers and symbols —Alphabet (lower case)—European letters, such as those with accents (e.g., **á, à, ä, ç**)

- You can select to input numbers and symbols by pressing button **2**.

4 Press ▲ or ▼ to select a letter of the alphabet.

Each press of ▲ will display a letter of the alphabet in **A B C ... X Y Z**, numbers and symbols in **1 2 3 ... > [ ]** order. Each press of ▼ will display a letter in the reverse order, such as **Z Y X ... C B A** order.



5 Press ► to move the cursor to the next character position.

When the letter you want is displayed, press ► to move the cursor to the next position and then select the next letter. Press ◄ to move backwards in the display.

6 Move the cursor to the last position by pressing ► after entering the title.

When you press ► one more time, the entered title is stored in memory.

7 Press BAND to return to the playback display.

Notes

- Titles remain in memory, even after the disc has been removed from the unit, and are recalled when the disc is reinserted.
- After data for 48 discs has been stored in memory, data for a new disc will overwrite the oldest one.
- If you connect a multi-CD player, you can input disc titles for up to 100 discs.

Displaying disc titles

You can display the title of any disc that has had a disc title entered.

● **Press DISPLAY.**

Press **DISPLAY** repeatedly to switch between the following settings:

Play time—**Disc Title** (disc title)

When you select **Disc Title**, the title of the currently playing disc is shown in the display.

■ If no title has been entered for the currently playing disc, **No Title** is displayed.

Using CD TEXT functions

Some discs have certain information encoded on the disc during manufacture. These discs may contain such information as the CD title, track title, artist's name and playback time and are called CD TEXT discs. Only these specially encoded CD TEXT discs support the functions listed below.

Displaying titles on CD TEXT discs

● **Press DISPLAY.**

Press **DISPLAY** repeatedly to switch between the following settings:

Play time—**Disc Title** (disc title)—**ArtistName** (disc artist name)—**TrackTitle** (track title)—**ArtistName** (track artist name)

■ If specific information has not been recorded on a CD TEXT disc, **No XXXX** will be displayed (e.g., **No TRK TTL**).

Scrolling titles in the display

This unit can display the first 10 letters only of **Disc Title**, **ArtistName**, **TrackTitle** and **ArtistName**. When the recorded information is longer than 10 letters, you can scroll the text to the left so that the rest of the title can be seen.

● **Press DISPLAY and hold until the title begins to scroll to the left.**

The rest of the title will appear in the display.

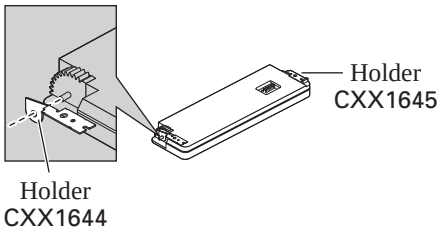
Note

When Ever Scroll is set to ON at the initial setting, CD text information scrolls continuously in the display. If you want to display the first 10 characters of text information temporarily and scroll from the beginning, press and hold **DISPLAY**. About Ever Scroll .

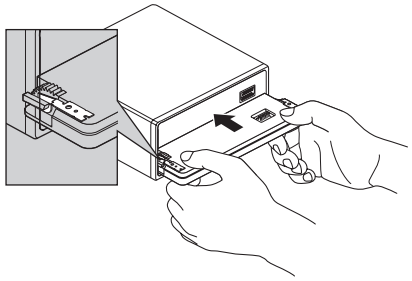
Fixing the Front Panel

If you do not operate the Detaching and Replacing the Front Panel Function, use the supplied fixing screws and fix the front panel to this unit.

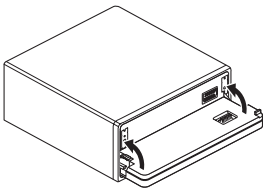
1. Attach the holders to both sides of the front panel.



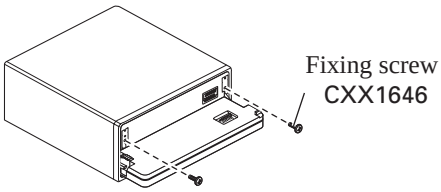
2. Replace the front panel to the unit.



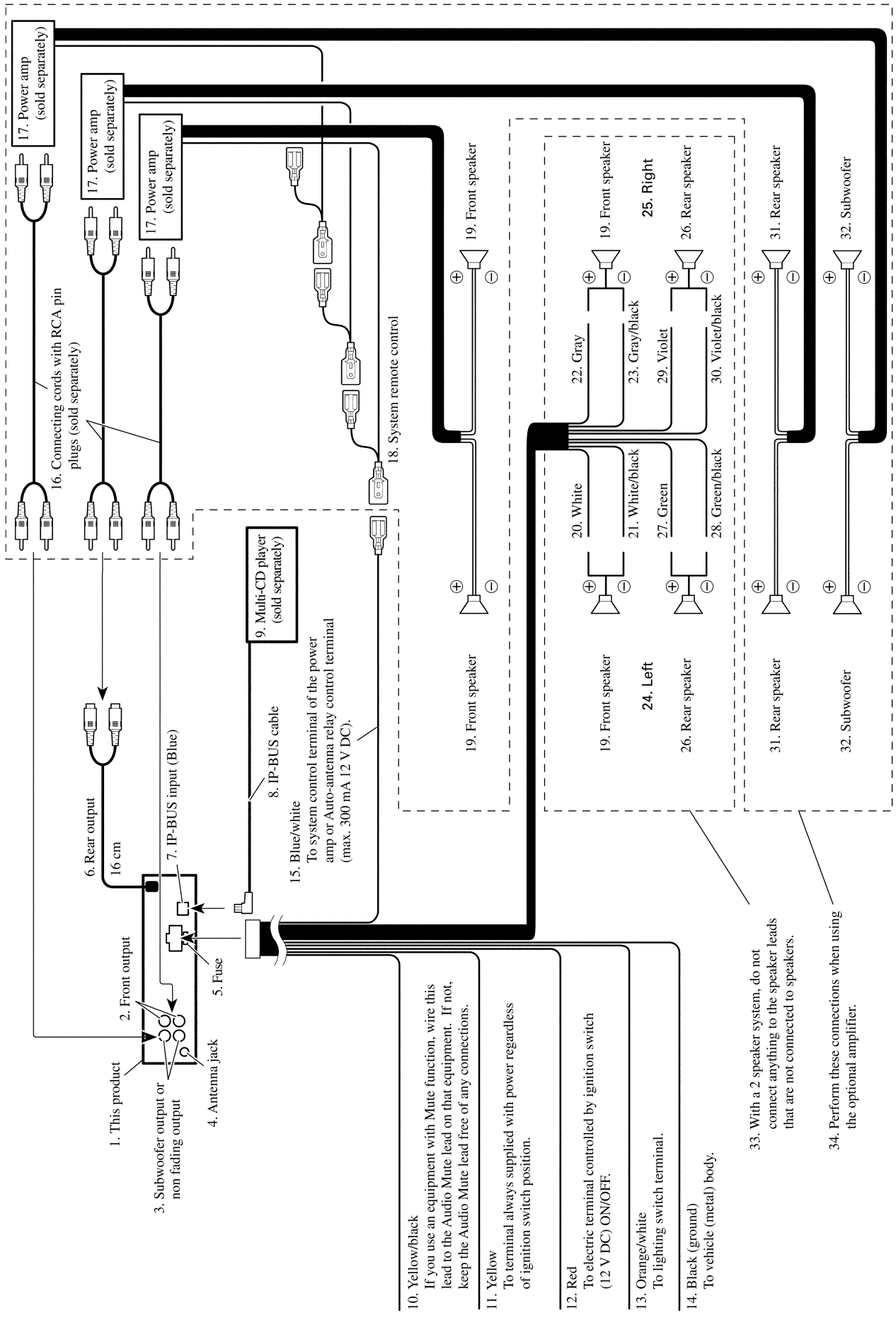
3. Flip the holders into upright positions.



4. Fix the front panel to the unit using fixing screws.



Connection Diagram


17. Power amp (sold separately)
17. Power amp (sold separately)
17. Power amp (sold separately)
16. Connecting cords with RCA pin plugs (sold separately)
18. System remote control
19. Front speaker
19. Front speaker
19. Front speaker
25. Right
26. Rear speaker
31. Rear speaker
32. Subwoofer
22. Gray
23. Gray/black
29. Violet
30. Violet/black
20. White
21. White/black
27. Green
28. Green/black
24. Left
19. Front speaker
26. Rear speaker
31. Rear speaker
32. Subwoofer
9. Multi-CD player (sold separately)
8. IP-BUS cable
15. Blue/white
To system control terminal of the power amp or Auto-antenna relay control terminal (max. 300 mA 12 V DC).
6. Rear output
16 cm
7. IP-BUS input (Blue)
2. Front output
5. Fuse
1. This product
3. Subwoofer output or non fading output
4. Antenna jack
10. Yellow/black
If you use an equipment with Mute function, wire this lead to the Audio Mute lead on that equipment. If not, keep the Audio Mute lead free of any connections.
11. Yellow
To terminal always supplied with power regardless of ignition switch position.
12. Red
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
13. Orange/white
To lighting switch terminal.
14. Black (ground)
To vehicle (metal) body.
33. With a 2 speaker system, do not connect anything to the speaker leads that are not connected to speakers.
34. Perform these connections when using the optional amplifier.

A

B

C

D

E

F

● Jigs List

Name	Jig No.	Remarks
Test Disc	TCD-784	Checking the grating
L.P.F.		Checking the grating (Two pieces)